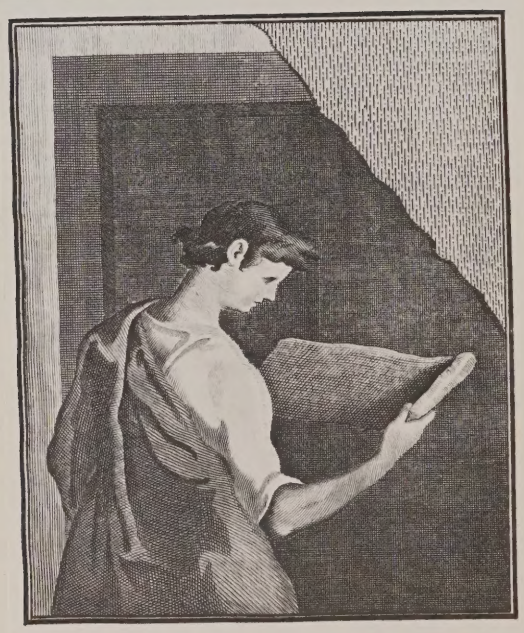

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The
WHITE PINE
SERIES OF
Architectural Monographs
Volume XI *Number* I

Massachusetts Bay Influence *on* CONNECTICUT VALLEY COLONIAL

BY
George Clarence Gardner

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Architectural Monograph

MASSACHUSETTS BAY INFLUENCE ON CONNECTICUT VALLEY COLONIAL

By GEORGE CLARENCE GARDNER

Being the FIRST *Number of Volume XI and the* FIFTY-NINTH

MONOGRAPH OF

THE WHITE PINE SERIES

Intimate *Treatises* on the ARCHITECTURE of the American Colonies and of the Early Republic presented with well ordered completeness, to further a broader understanding and to create a permanent Record of Early American ARCHITECTURE

Russell F. Whitehead, Editor

Containing also, MEASURED DRAWINGS
From the GEORGE F. LINDSAY Collection of *Early American* DOCUMENTS

The WHOLE *imposingly embellished by* Reproductions of
Beautiful *Photographs By* KENNETH CLARK

NEW YORK

Published SIX TIMES a year *by* RUSSELL F. WHITEHEAD, 150 East Sixty-first Street

Yearly Subscription, payable in advance $2.00, Canada $2.25, Foreign $3.00

SINGLE MONOGRAPH, 50 CENTS

Printed by The Marchbanks Press, New York

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Front Doorway

THE SAMUEL PORTER HOUSE, HADLEY, MASSACHUSETTS

Massachusetts Bay Influence on CONNECTICUT VALLEY COLONIAL

By George Clarence Gardner

OUR PURITAN ancestors were evidently an uneasy race. Those who sailed into Massachusetts Bay and settled within the present Metropolitan district of Boston numbered among them a group of individuals that after five years found the population so congested as to start them on that western exodus which continued for more than two centuries.

The first body of these adventurers halted at Hartford in 1635, and the following year a second unit stopped at Springfield; and with the growth of these two centers began the development of what was then—and for many years after—the Wild West.

For a hundred years at least this strip of land from Saybrook at the mouth of the Connecticut River to Northfield, a strip about a dozen miles wide and eighty miles long, developed in an intermittent fashion, and during this period the dwellers in the Connecticut Valley above Hartford, were thrown pretty generally on their own resources. Boston was of course their rallying point and objective of their exports and the source of their imports of such material matter as seemed essential to their growth. As for spiritual matter, they were amply supplied—a self-contained community of one hundred per cent efficiency. But for things material, it was a long and hazardous voyage—as long as the trip today "all the way by water" from St. Louis to New York, and by land for over half a century, their only communication with Boston was a trail suitable only for pack horses.

These conditions had inevitably an influence on the architecture of the region. Until local saw mills were established, buildings, either public or private, were of the simplest sort, and three generations of this simple life could not fail to have its effect on the character of the building of succeeding generations. The valley towns in Connecticut being nearer to the sea and source of supplies, outstripped their neighbors to the north, very rapidly in the late 17th and the early part of the 18th century, and it was not until about twenty-five years before the Revolutionary War that any architecture, in which evidence of wealth and a cultured appreciation of it appeared.

But there did appear early in the 18th century most interesting examples of the endeavors of certain builders to carry out with their limited material, tools and a memory more or less fallible, the architectural ideals as expressed in the more favored parts of New England.

The Samuel Porter house in Hadley is a striking example of this struggle to embody classic recollections under adverse circumstances.

It is of more than passing interest, by the way, that Samuel Porter in 1713, the year in which this house was built, was Moderator of the town of Hadley and chairman of the building committee, and that the committee was given power to build the church with no particular restrictions as to cost. It may be that Samuel thought it was an economical time to build his own house. Perhaps he built it for his son, Samuel, who the year before had brought his bride, a Longmeadow girl, to Hadley, and it may be that her admiration of the door-way with its curiously wrought pediment and sculptured pilaster caps, prevailed on her Longmeadow brother in 1734, to use it there as a model, and (very naturally) in doing so, add to its elaboration.

This is mere conjecture as to the Colton house in Longmeadow, but the dates indicate that the Porter door-way may have served as a model for a half dozen others in Springfield, Longmeadow, Westfield and the neighborhood.

It is also probable that Porter received his inspiration from the Connecticut house of the time, for the settlers of Hadley, which then included Amherst, Granby and South Hadley, were a group of ecclesiastical mugwumps, or, perhaps more strictly speaking, Progressives, who after shaking the very foundations of the Church in Hartford, departed in a body for Hadley, in the year 1659.

It might almost be said that the majority of the Connecticut Valley towns were due to theological differences, for in nine cases out of ten, the petitions to the General Court praying that certain portions of the Connecticut Valley in Massachusetts be given leave to

incorporate as towns, rehearse the trials and difficulties of the petitioners in adjusting themselves to supposed grievances in Church government.

The period between the close of the French and Indian and the outbreak of the Revolutionary Wars, was for western Massachusetts, one of rapid development and material prosperity. Roads had been built connecting the valley with Boston, built chiefly through the exigencies of warfare; troops, their officers and the inevitable supplies that went with it, had to pass through the valley on the way to the seat of war around Lake George and Lake Champlain. More delegates found it possible to go more frequently to the great and General Court in Boston and from this time on, the influence of the eastern part of the state is more evident both in interior detail and external form.

Wealth was slowly accumulated; some of it perhaps in a slightly questionable way.

In December, 1764, the agents of Gov. Wentworth of New Hampshire, the Crown's officer for reserving white pine timber, seized in Hadley 733 logs which were all over the 24″ diameter, prescribed by the Crown. Some of them were 44″ in diameter and the townspeople had thriftily detached them from the log drive for their own use.

Over in Northampton two years before this, of 363 trees over 80 feet in length, which had been reserved by the Crown's agents in the fall, but 37 remained in the spring and no one knew where they had gone. There are records of riots in Hadley, South Hadley and Northampton when these unpopular Crown Agents endeavored to do their duty.

White pine was then as eagerly sought for as it is today and the panelled walls of pre-revolutionary houses, testify to the energetic acquisitiveness of our forefathers. Comparatively little grew in the Connecticut Valley south of the Vermont (or more properly speaking, New Hampshire) line.

The records of Northampton, Hadley and other Valley towns, refer to the importation of white pine from the northerly portion of the valley, from which it would appear that all that was used was not the spoil of the Crown.

Pitch or yellow pine, however, was abundant, and was used to some extent for building, but chiefly for turpentine. One individual in Hampshire County, Joseph Parsons, forwarded between 1696 and 1706, five hundred barrels, an average of about seven tons a year, all of which went by the river, sound and sea. In fact, the turpentine industry threatened so to curtail the supply of "candle wood" used almost universally for general lighting purposes in those early days of the 18th century, that the towns are found laying severe penalties upon unrestricted turpentine "boxing."

We were a sturdy lot in this part of the Commonwealth in those days; the town tax rate in Hadley for example, for the year 1771 showing 369 barrels of cider in the town, which gave an average of four and one-third barrels to a house, none of which was for sale.

From the close of the Revolutionary War to about 1820, the influence of the eastern part of the state made itself felt chiefly in the form of the buildings. The detail was still modified to a considerable degree by the limitations of material and money, and after 1790 was still further affected by the work, first, of Asher Benjamin and about ten years later of Isaac Damon.

Benjamin's first plates on architecture were published in Greenfield in 1797, and the influence of this little book and of the executed work of Benjamin himself, was very great in all the Massachusetts towns of the Connecticut Valley. The Squire Bowdoin house at South Hadley Falls may not have been designed by Benjamin, but evidently if it was not, his "*Country Builder's Assistant*" was in the hands of the builder. The Hadley Church too, as well as the house at the end of the green in Hadley, in decorative detail and still more in form, expresses a strong Benjamin influence.

The various works published by Benjamin after he went to Boston and became impressed with the Neo-Greek revival early in the 19th century, did not so much affect western Massachusetts, for at that period, Northampton had grown in influence to such an extent, as to attract to it from New York, Isaac Damon; and from about 1812 to 1835, he was evidently the leading architect in the western part of the state; his work however being chiefly confined to buildings of a public or ecclesiastical nature.

Perhaps after all, the influence of Massachusetts Bay on the architecture of the Connecticut Valley is more a psychological than a physiological one.

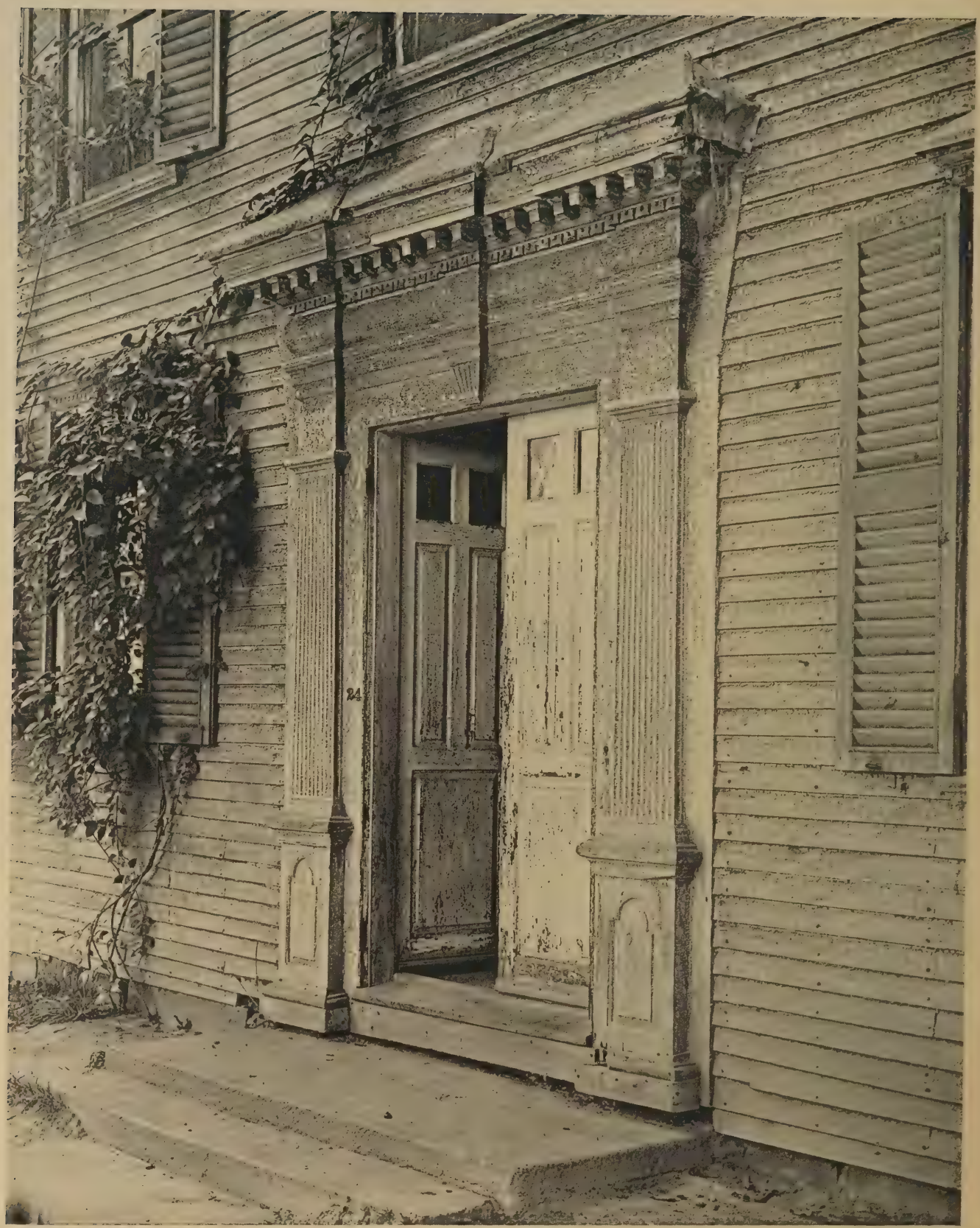
Generally speaking, the settlers in the valley were less given to the amenities of life than to the stern realities. They lived for several generations pretty well removed from all the luxuries and their time was very completely occupied in labor and border warfare, with the result that a certain austerity, and, one might say, meagerness, tempered their manifestations in architecture, a characteristic which they retained for several generations after the conditions which brought it about had pretty well disappeared. It was rather a striking confirmation of the well accepted fact that the commercial sea-faring community develops more rapidly in an artistic way, than do inland and agricultural communities. But in spite of all this, the persistent endeavor of these fighting farmer theologians to give to their houses and churches, as far as lay within their power, the characteristics that marked the towns from which they came, is always evident.

THE SAMUEL PORTER HOUSE, HADLEY, MASSACHUSETTS

Detail of Front Door
THE SAMUEL PORTER HOUSE, HADLEY, MASSACHUSETTS

Detail of Corner Post

THE SAMUEL PORTER HOUSE, HADLEY, MASSACHUSETTS



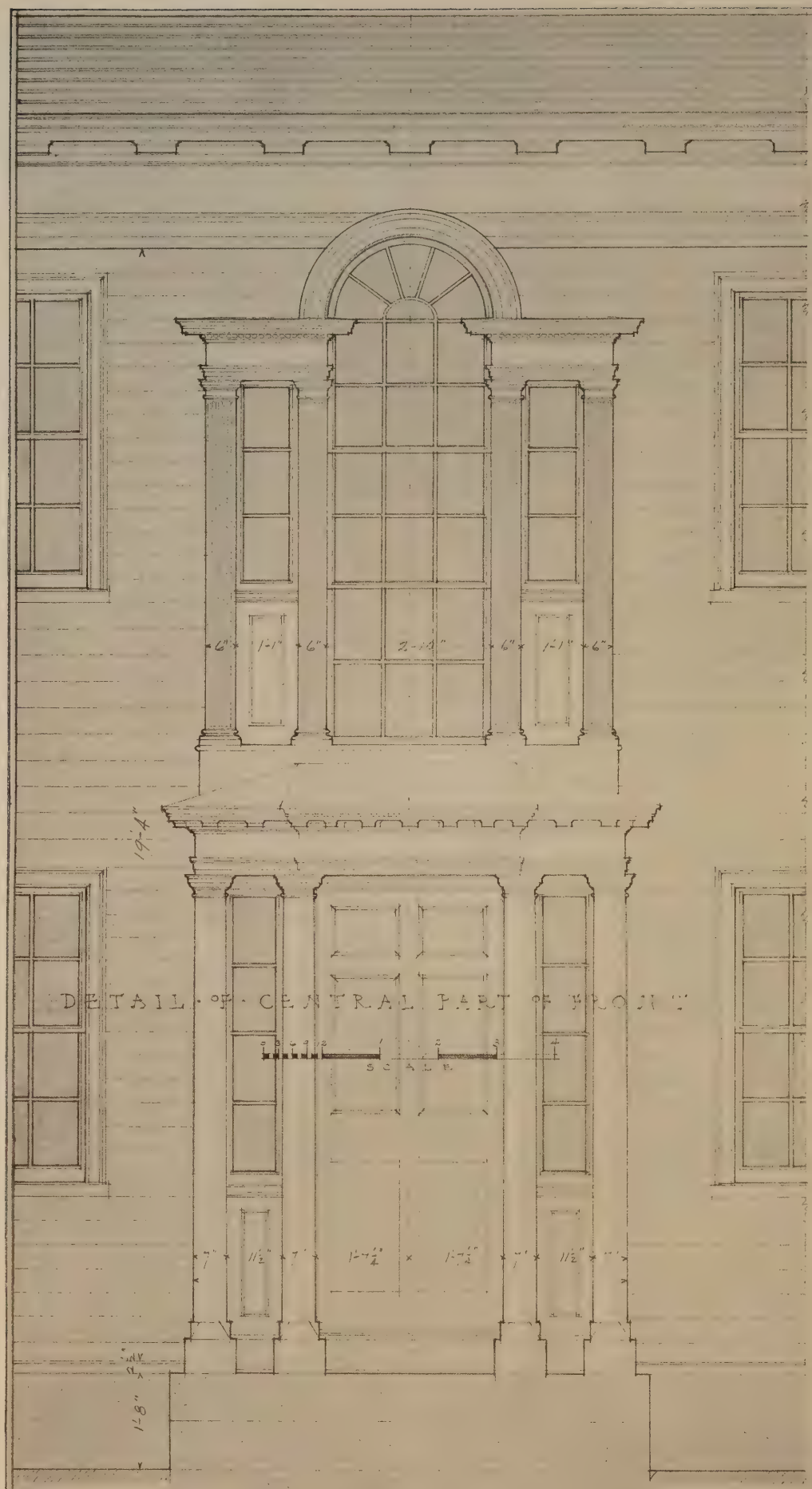
Entrance Detail

THE CHARLOTTE PORTER HOUSE, HADLEY, MASSACHUSETTS

The WHITE PINE SERIES *of*
EARLY AMERICAN DOCUMENTS

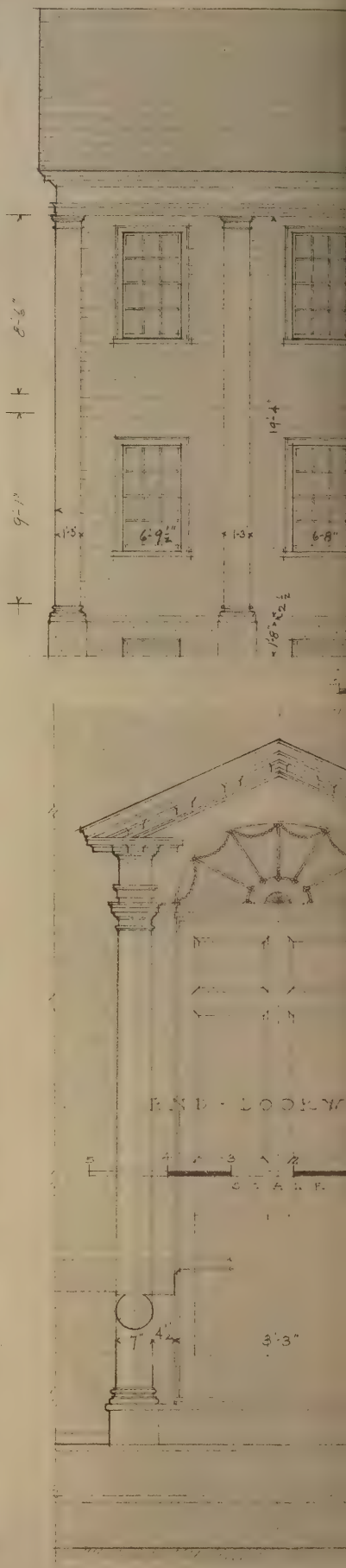
SQUIRE BOWDOIN HOUSE · SOUTH HADLEY FALLS · MASSACHUSETTS

DETAIL OF FRONT PORCH



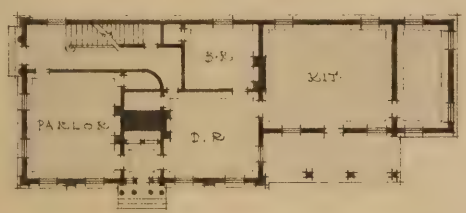
DETAIL OF CENTRAL PART OF FRONT

SCALE.



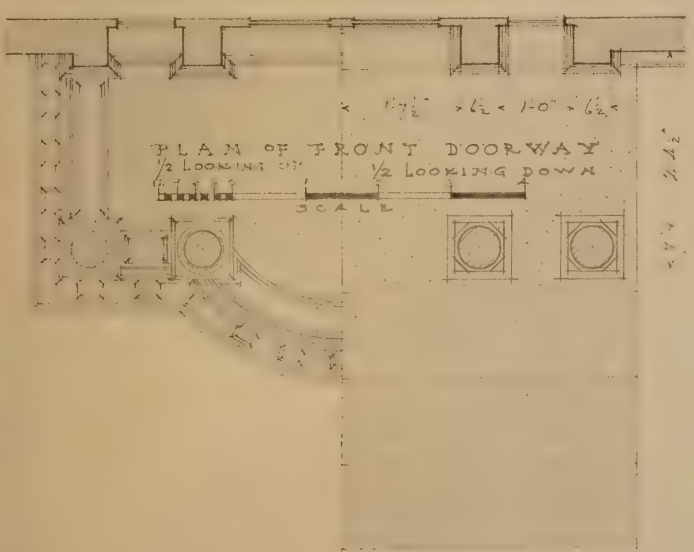
END DOORWAY

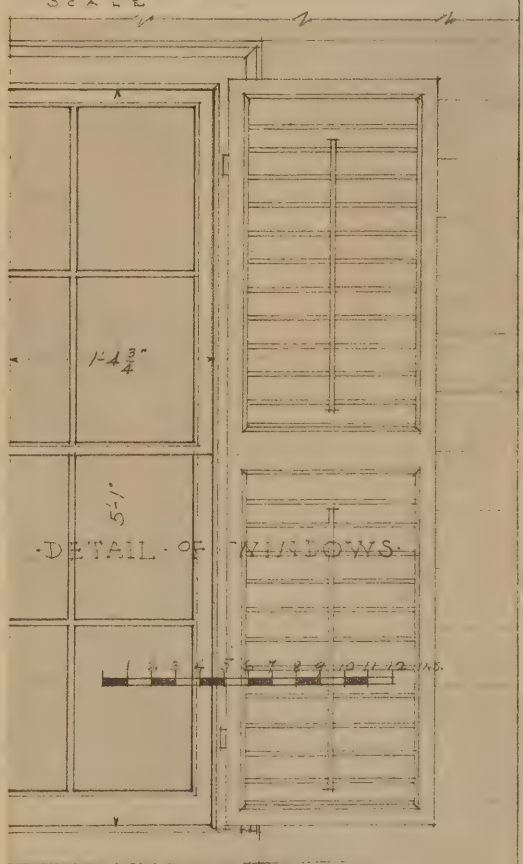
SCALE.



THE SQUIRE BOWDOIN HOUSE

SOUTH · HADLEY · FALLS · MASS ·





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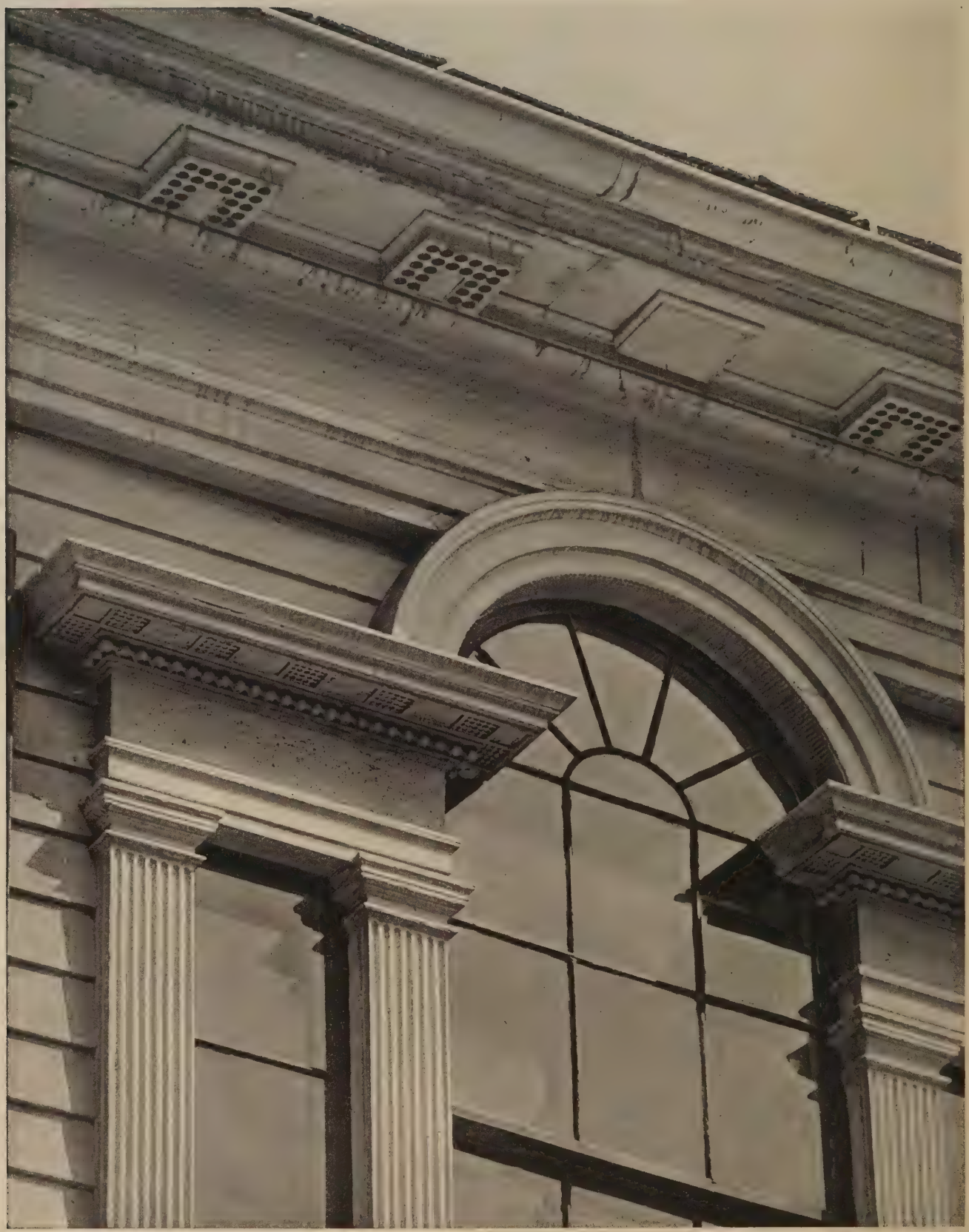

DETAIL OF MAIN CORNICE

THE SQUIRE BOWDOIN HOUSE · SOUTH HADLEY FALLS · MASS·

THE SQUIRE BOWDOIN HOUSE, SOUTH HADLEY FALLS, MASSACHUSETTS

End Entrance Doorway

THE SQUIRE BOWDOIN HOUSE, SOUTH HADLEY FALLS, MASSACHUSETTS

Detail of Doorway

HOUSE AT END OF GREEN, HADLEY, MASSACHUSETTS

THE OLD MEETING HOUSE, HADLEY, MASSACHUSETTS
Dating from 1808

Weyerhaeuser Forest Products

The Publisher's Introduction to *The Monograph Series'* Only Advertiser

By Russell F. Whitehead

OFTEN the manufacturers of building materials meet with but indifferent success in interesting the architect by their advertising appeals. In part this failure is a matter of psychology; in part, ignorance of the conditions under which the architect works, and even more, a lack of understanding of the means by which his attention may be attracted and retained.

The architectural profession is usually regarded by the manufacturer as exclusively a profession, rather than as a fine art. While much of the business of the architect is concerned with practical details, it is recognized and accepted throughout the profession that the successful architect must be, first of all, the artist or man of imagination; second the builder, and finally the man of practical common sense. Therefore the majority of the profession can be most readily appealed to upon their artistic side.

One of the most intelligent efforts that has been made by anyone whose object was to achieve publicity for a material, in a useful and wholesome way, has been the "advertising" of white pine in *The White Pine Series of Architectural Monographs*. This publication has been the dignified means of presenting a building material to the profession in a way that was psychologically devised to receive from them a grateful response and appreciative approval. The development of this publication from a house-organ into a full-fledged architectural journal, supported in part by the profession it was designed to reach, seems most logical, as the architectural appeal has made *The Monograph Series* one of the most valued documents in the architects' reference library.

Weyerhaeuser Forest Products recognize the qualities that have made for the success of this journal and are in sympathy with its ideals. They appreciate the aesthetic appeal of the editorial features of *The Monograph Series* which have attracted the interest of the architect. They understand the diverse attributes of the architect and know that while he is at all times the artist, he is nevertheless the practical business man; that he combines the aesthetic temperament of a creator of the beautiful with the matter-of-fact qualities of the man of affairs. Weyerhaeuser Forest Products have a message and a service for the architect which they will publish in these advertising pages. They will talk to the profession from the practical engineering and common-sense point of view. They realize that every architect is familiar in some degree with lumber and in a general way with the progress of lumber manufacturing. They feel however, that the profession will welcome information and dependable data on the many new species of lumber and lumber by-products which are now offered for building uses. Weyerhaeuser Forest Products, being interested in, and manufacturers of, so many different kinds of lumber are not prejudiced in favor of or against any one species. Their advice to the architect, therefore, can be given impartially.

Forestry involves every individual in the United States. It affects the cost of homes, offices, school buildings and churches; the cost of travel, clothing and food; public health, education and recreation. Forestry is a big subject and it will be discussed in a big broad-minded way by the largest lumber manufacturers in the United States.

The Weyerhaeuser lumber interests started in 1857. Under the leadership of the late Mr. Frederick Weyerhaeuser, a great many strong properties were built up; large and important timber holdings were acquired; big saw mills were operated at various places scattered throughout Minnesota, Idaho and along the Pacific Coast. The interests of Mr. Weyerhaeuser and his associates were expanded to include, in addition to timber holding companies and sawmill operating companies, some large groups of retail lumber yards; sash, door and millwork factories; paper mills and several small common carrier railroads.

Each of these companies had a splendid history and an enviable reputation. Each company was a unit in itself and each marketed its own products. The Weyerhaeuser family of affiliated companies were later organized into one centralized service unit, now known and doing business under the name and trademark of

HOUSE AT END OF GREEN, HADLEY, MASSACHUSETTS

Weyerhaeuser Forest Products. The various interests have been moulded into an institution. There can be no doubt that the strength of a family can be greater than that of its individual members; that companies, without sacrificing their individual character can render a united service which is better in many ways than they could possibly render as separate organizations.

With the centralized service unit established, the next step in the evolution of the Weyerhaeuser interests was the organization of a centralized sales company to market the products of this family of mills. The Weyerhaeuser Sales Company with headquarters at Spokane, Washington, and branch offices at New York, Chicago, Baltimore and Saint Paul, was formed for this purpose. Some sixty sales representatives are at work in the field selling Weyerhaeuser forest products direct to the building supply dealer, the millwork manufacturer and the industrial lumber user.

Weyerhaeuser Forest Products have delved deeply into research; research into the countless uses for lumber; into the qualities and characteristics of different species of woods which have been heretofore little known; into the ever increasing lumber needs of industry; into the problem of reforestation and into the more intensive utilization of lumber in the forest and at the mills.

In the districts being operated by the Weyerhaeuser interests such lands as are incapable of growing any other crops except trees have been set aside under scientific forest management for the purpose of protecting the young growth of natural reproduction. In this way timber may be grown and the industry perpetuated in so far as economic laws and the laws of the nation and of the various states make this practical and profitable.

A Service Department, with a background of scientific knowledge, was formed to promote the more intelligent use of lumber. Technically trained engineers, who know the structural qualities of the various woods now being used commercially, have been employed so that architects and engineers may avail themselves of their advisory service.

It is no admission of weakness for an architect to use the skill of the manufacturer's specialist. He cannot be expected to be a master of every practical detail—his life is too short and too full of professional duties. His part is to collect and correlate the knowledge of many specialists.

A Publicity Department was created to promote the better understanding of lumber among all classes of lumber users.

Concentration yards have been established to improve the facilities for the distribution of lumber. Weyerhaeuser lumber is now loaded at the mills on the Pacific Coast and shipped in Weyerhaeuser-owned vessels through the Panama Canal, to a great modern distributing plant at Baltimore. The forest resources of the Pacific Coast are being brought to the door of the Eastern markets. Weyerhaeuser lumber can be furnished to the building supply dealer in from three to five days instead of the five or six weeks ordinarily required for all rail shipments from far western points. A similar concentration yard is now in operation at Saint Paul providing twenty-four hour service to the great territory of the middle west.

At the saw mills improvements in manufacturing, grading and handling facilities have kept pace with the progressive spirit of the enterprise. Kiln drying has been reduced to a positive and definite science. Car loading methods have been improved and standardized to insure safe delivery, in good condition, of all lumber shipped by rail.

The Weyerhaeuser Forest Products trade-mark, the maker's pledge of personal responsibility, is on the end of each piece of lumber of their manufacture.

The white pine lumber manufactured and sold by the Weyerhaeuser Mills is real white pine. To protect the architect against substitution, the better grades of white pine have the species mark GENUINE WHITE PINE plainly marked on each piece, in addition to the maker's trade-mark guarantee. The contractor who furnishes Weyerhaeuser Genuine White Pine will have no difficulty in proving to the architect that it is real. The architect may make doubly sure that he gets genuine white pine by specifying that the wood shall be species marked.

The story of the progress of Weyerhaeuser Forest Products during the past few years and of the broad policies which actuate the owners of the Weyerhaeuser properties is only partially told in this introduction to the organization. They have been thorough in their purpose of promoting a more intelligent use of lumber. One of the services rendered is the sending of Crating Engineers, not to sell lumber, but to assist various industries in lowering their packing costs by teaching them how to build more efficient shipping containers with appreciable saving in lumber, in labor cost and in freight charges.

A By-Product Division has also been organized and

THE CHARLOTTE PORTER HOUSE, HADLEY, MASSACHUSETTS

DETAIL OF SIDE DOOR—THE CHARLOTTE PORTER HOUSE, HADLEY, MASSACHUSETTS

is now in operation developing new products from what was formerly waste. "Balsam-Wool", a new insulating material has been put upon the market and is being used for heat and sound insulation in buildings. In another form, "Balsam-Wool" is used as a sound absorbent for accoustical work. Much more is promised in this direction; for instance "synthetic lumber" from sawdust, and sawmill waste. In Minnesota they are using jack-pine and aspen, heretofore of little known value, for the making of excellent grades of book, bag and wrapping paper.

We have worked with the Weyerhaeuser Forest Products organization for many years. The Weyerhaeuser white pine mills are the largest group manufacturing white pine lumber. They were instrumental in the organization of the White Pine Bureau and did their part in supporting it during its years of service. As Editor of *The White Pine Series* we have visited the mills in Minnesota and in the Inland Empire to learn at first hand about the supply and manufacture of white pine. We have gone on to the Pacific Coast where Douglas Fir is growing in massive stands and where the Weyerhaeuser mills are operating. We have had cordial business relations over the years with the principals of this great group of affiliated properties. We know their absolute insistence upon honesty and square dealing and their desire for friendly human relations. We have worked side by side for ten years with Mr. George F. Lindsay, lumberman and patron of the fine arts; first as Chairman of the White Pine Bureau, representing the Weyerhaeuser interests in that association and now as President of Weyerhaeuser Forest Products. It is quite natural that Weyerhaeuser Forest Products should see the value of addressing the architectural profession through the pages of *The White Pine Series of Architectural Monographs*. We are sure that the profession will appreciate the collection of Measured Drawings which we are now building up under the patronage of Mr. Lindsay for exclusive publication in this journal.

Weyerhaeuser Forest Products are determined to carry on to the full measure of their opportunity the work that the White Pine Bureau began. Aside from any service this Bureau may have rendered to architecture and quite aside from its main purpose of establishing the fact that white pine is still available it also had its inspirational value to the manufacturer; the inspiration of a better understanding; a new vision of greater service still to be rendered.

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The

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SERIES OF

Architectural Monographs

Volume XI *Number* 2

INTERIOR WOODWORK in New England

DURING THE SEVENTEENTH AND EIGHTEENTH CENTURIES

BY

Edwin J. Hipkiss

Program of the *Ninth Annual* Architectural Competition on Pages Seventeen and Eighteen

AN

Architectural Monograph

INTERIOR WOODWORK IN NEW ENGLAND

During the Seventeenth and Eighteenth Centuries

By EDWIN J. HIPKISS

Being the SECOND *Number of Volume XI and the* SIXTIETH

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STAIR HALL—THE VERNON HOUSE, NEWPORT, RHODE ISLAND

Built in 1758

INTERIOR WOODWORK IN NEW ENGLAND

During the Seventeenth and Eighteenth Centuries

By EDWIN J. HIPKISS

IN WRITING of our early interior woodwork, or in illustrating it, one feels a sense of restriction and a temptation to wander from the chosen topic into a treatment of old rooms as a whole. Obviously a room is not complete from an artistic point of view until it is furnished appropriately; old woodwork was but a part of that total effect. That there was a marked relationship, particularly in New England, between the character of architectural detail and the furnishings of the several stylistic phases is a fact needing wider recognition, since there is always the easy path of unrelated mixtures.

Nearly all our old rooms have suffered such losses, or accumulations, that both research and imagination are required to gather together once more their scattered elements, the effect of charm and decorative entity. Photographs and drawings serve as an introduction to old interiors but, it seems, one must actually enter a room to sense its scale, its proportions and the relation of one part to another.

Our earliest interiors, those of the 17th century, represent a folk-art, medieval in character. By the beginning of the 18th century a new style was evolved and, due to the availability and use of builder's handbooks, a sense of style was recognized from Maine to South Carolina. Although we know changes in the handling of this style varied according to time and place, yet changes came slowly and young men were trained to do and to think in the ways that would be expected of them in their maturity. Every joiner, cabinet-maker, housewright, carpenter, or carpenter-builder of the 18th century worked in the style of the time freely interpreted. All moulded work from the cornice of a high chest to the cornice of a mansion was cut by hand with planes formed to make the curved elements of this simple architecture of classical origin. There were quarter-round, half-round, ogee, scotia, cyma forms, etc., in planes of graduated sizes and these formed the keyboard upon which the designer or master workman played his endless variations.

In the woodwork of both the 17th and the 18th centuries the element of craftsmanship is important. The work of intelligent men, proud of a manual skill passed on from master to apprentice or from father to son, produced an ever fresh handling of well-known forms that were acceptable to several generations.

The architect of the present day may easily have a passing thought of envy in considering the directness, the co-ordination of artistic ways and means, that existed here in the 18th century. A scheme of interior woodwork had to be but sketched in a rough way, by the man who knew what he was about, and there were trained workmen all ready at hand with an established method and an ability to translate general ideas into finished work. To be sure they used and understood a limited architectural expression but, according to their needs, they mastered it and that, perhaps, is why we respect an inheritance of their work which makes up in genuineness what it may lack in "impressiveness" or costliness.

For our purpose, four general divisions in this early woodwork may be made: The work of the 17th century and three phases of the 18th century; early, middle and late. The woodwork of the 17th century and that of the 18th sprang from separate architectural traditions; the earlier work had a kinship with the smaller provincial buildings, still Gothic in origin, of 16th century England. Our woodwork soon after the year 1700 was wrought in the Anglo-classic style but in New England it bore the stamp of a certain American independence.

Eighteenth century woodwork was truly "finish" in the present-day sense of the word; it was a lining whereas the work of the 17th century was structural, an integral part of the building. Interiors of the 17th century displayed their corner-posts, girts, summer-beams and rafters with a frank acceptance of the structure. This exposed framing, mostly of oak, with its sound joinery is peculiarly attractive in our less robust and economical times. As a general rule, sheathing was placed against interior partitions in random widths of white pine and moulded bands were cut on each edge. These "shadow moulds," aside from their decorative value to the room, helped to enrich the line where the boards met in halved joints. There are also instances of the use of such sheathing applied horizontally.

Doors were of the batten type, often of two vertical boards moulded at the joint, with cross battens near the top and bottom and such doors with their wrought iron hinges, latches and faceted nail heads have a simple attractiveness and charm. In fact rooms of this early period with their mellowed tones of grayish-brown, their straight-forward use of material simply adorned, their sturdy joinery and huge fire-places have a rough honesty and strength which appeal to us, at times, as do old ships framed of oak and with an appearance of readiness for all weather—fair or foul.

For our second division there are the rooms of the earlier part of the 18th century in the new style with chimney breasts, dadoes, and even whole walls paneled with a breadth and simplicity in keeping with a general sense of design seen also in the furniture and silver of the time. Although walls were sometimes enriched with a pilaster treatment, the detail in both pilasters and cornices has a certain restraint and quietness that differentiates it from similar work of the mid-18th century. This is well indicated in a room in the Webb house at Wethersfield, Conn., illustrated by Plate XVII.

A general lack of mantel shelves is characteristic of these earlier rooms; bolection mouldings framed the fire-place openings and were also used to frame doorways and the wall panels. Doorheads were often semicircular in form and shell-top cupboards belong especially to this period. It seems necessary to add that against comparatively simple woodwork, decorative richness was gained in the occasional use of the popular "japanned furniture," and the general use of colorful needlework and other textiles.

In New England during the mid-18th century there is evidence of a richer and bolder treatment of interior detail in keeping with the vigorous handling of furniture design then indebted to the school of Chippendale. There was a more elaborate treatment of the chimney breast, now generally fitted with a mantel, and a use of carving, consoles, "eared" architraves, fuller and richer cornices and pediments both plain and broken. One thinks of carved furniture with claw and ball feet, varied and elaborate chair backs, sofas of generous proportions and looking-glass frames with scroll and broken pediment forms as representing the spirit of this period. This same vigor in form and decoration applies to the work of the silversmiths.

The mansion-houses of Maryland and Virginia had greater variety in interior woodwork at an earlier date than did the fine houses of New England.

The change in general taste is well seen in two important houses at Portsmouth, N. H., the Warner House (1728) and the Wentworth-Gardner House (circa 1760). The drawing-room of the Warner House, for example, has large bolection mouldings surrounding the fire-place, and around the arched door frames, smaller bolection mouldings surround the raised panels. The cornice of few and stout members is without dentils or modillions—there is a bold simplicity. A similar room in the Wentworth-Gardner House of about 1760, has a fuller treatment of the cornice, one room has a full entablature, and the stair hall with much enrichment and variety of elements, has both a dentil course and modillions in its cornice. Doors are rectangular; the architraves are flattened and also "eared" in several rooms.

However, although we may form our impressions of the works of a time upon dated examples there is a reservation to be kept in mind. In towns remote from the great centers they were slow to change and old tradition held on and a house with all the appearances of having been built about 1730 in the vicinity of Boston or Newport may be as late as 1750 in the valley of the Connecticut River.

The interior woodwork of the last quarter of the 18th century and of the early years of the 19th had attained a refinement, and at times an attenuation, which differed in the extreme from all earlier work. This was the time of subtlety and sophistication in design and not only planning but the attempt to visualize a result on paper became the aim of the planner of these later houses. Many fine houses of an earlier time had been outlined in a casual way by the owner and with general instructions for the parts such as "to be finished like Curnall Smith's loer rume." Much was left to the eye of the builder. In these later rooms, however, details and proportions were carefully studied in a drawing-board manner.

Such woodwork formed the natural background for refined furniture in the style of Heppelwhite or Sheraton, for delicate mirror frames, fine porcelain and silver with elegance and grace both in its form and its engraving.

Moulding forms had changed from the profiles adapted from the simpler orders to quirk-moulds of fine scale; there were delicate beading, elliptical sections and areas. An ornamental treatment was evolved by forming running patterns of gouge cuts and small borings usually in the frieze of a cornice. Toward the end of the century modelled reliefs in French putty were applied to mantelpieces, doorheads and cornices and this method of "putting on style" probably caused others before us to refer back to "the good old days." However, from the vantage point of an additional hundred years or more we see in this unassuming work of the 18th century three old essentials of good architecture, "a regard for Beauty, Necessity and Tradition."

STAIR HALL—THE WEBB HOUSE, WETHERSFIELD, CONNECTICUT

Built for Joseph Webb, circa 1753

INTERIOR—THE THOMAS LEE HOUSE, EAST LYME, CONNECTICUT

Original part of house built circa 1660

INTERIOR—THE BURNHAM HOUSE, IPSWICH, MASSACHUSETTS

Built between 1638 *and* 1670

INTERIOR—THE NOAH WEBSTER HOUSE, WEST HARTFORD, CONNECTICUT

Built circa 1676

INTERIOR—THE OLD SHIP TAVERN, ESSEX, CONNECTICUT

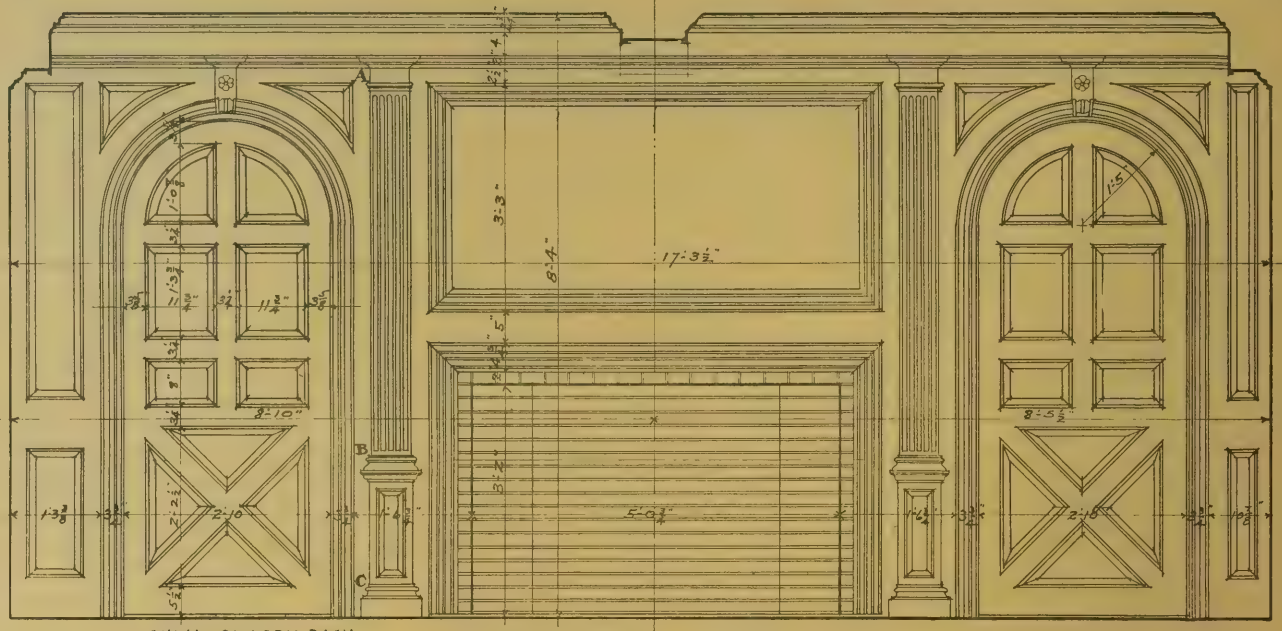
Built by Uriah Hayden, circa 1675

The WHITE PINE SERIES *of*
EARLY AMERICAN DOCUMENTS

THE WEBB HOUSE—"HOSPITALITY HALL"
WETHERSFIELD, CONNECTICUT

Built for Joseph Webb, circa 1753

MAIN ENTRANCE DETAIL



MANTEL · WALL ·
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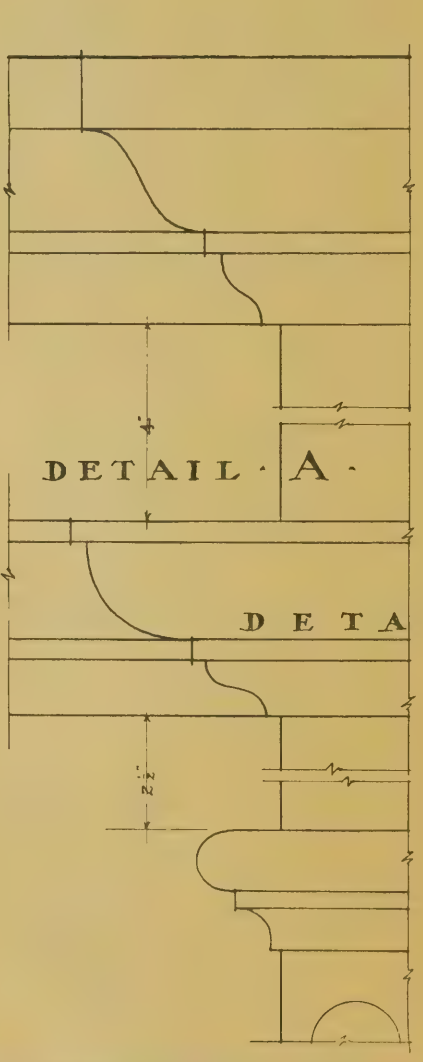
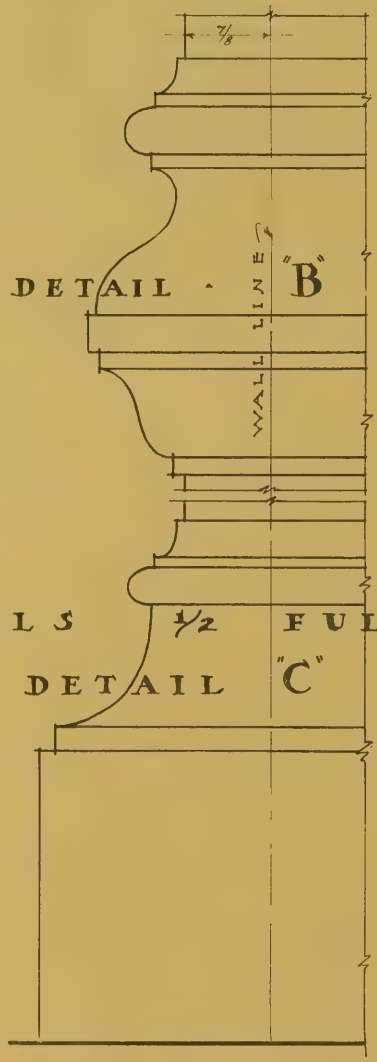


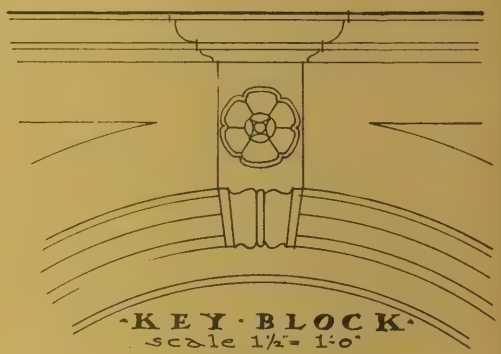
DETAIL · A ·



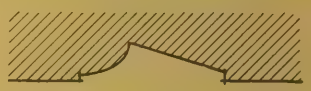
DETAIL · "B"

DETAILS 1/2 FULL SIZE

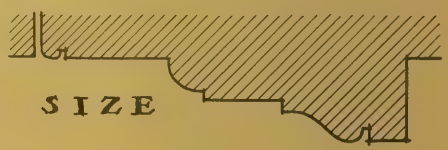
DETAIL "C"



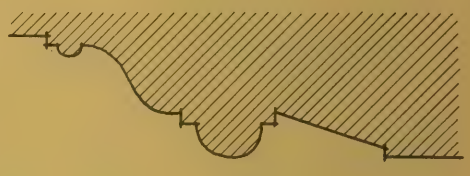
·KEY·BLOCK·
scale 1½"= 1'-0"



·PANEL·MOLD·

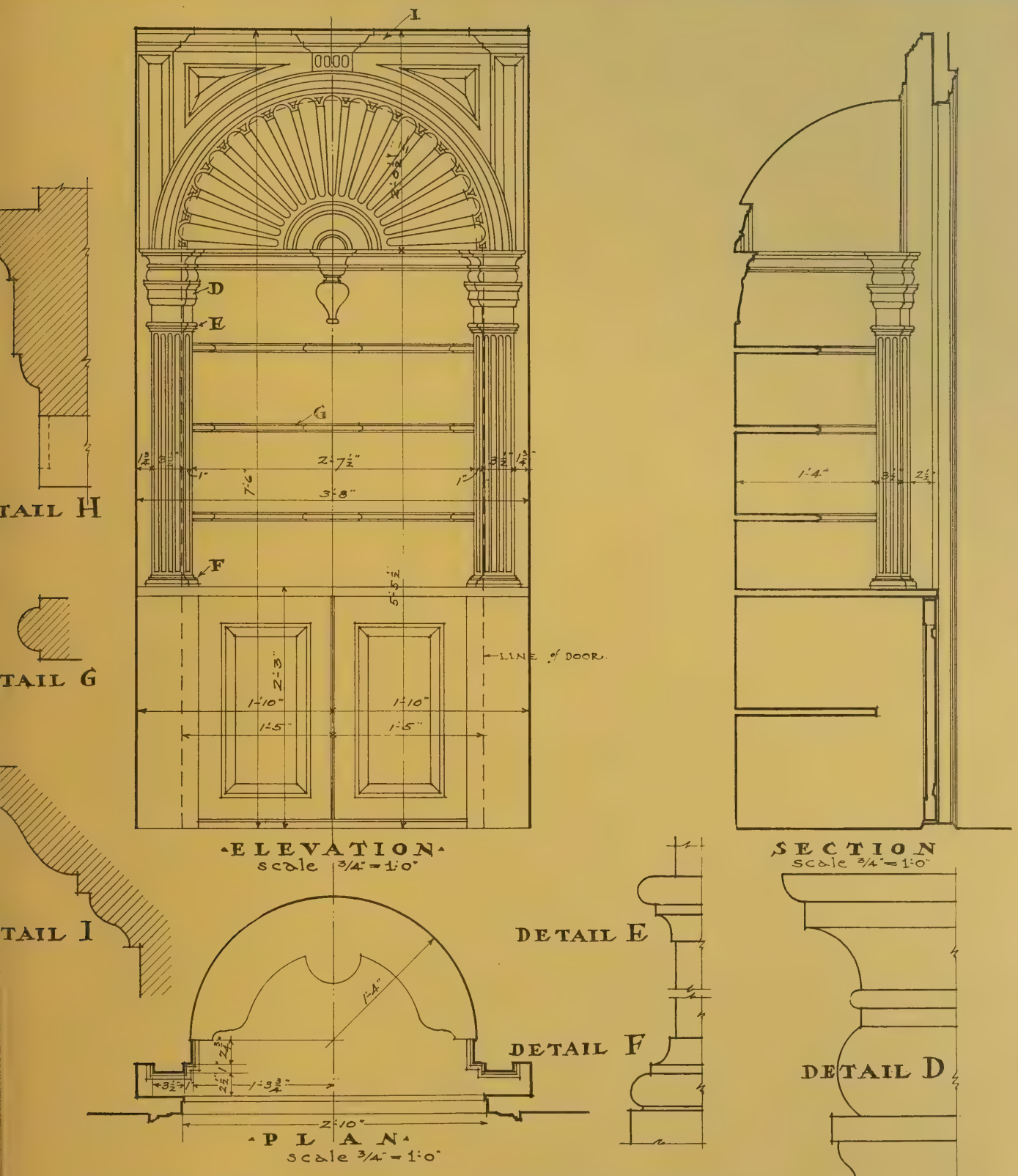


DOOR · TRIM



PANEL·OVER·MANTEL

These Drawings are reproduced ex



PARLOR · WALL · PANELLING · AND · CHINA · CLOSET · · · · · WEBB · HOUSE · WETHERSFIELD · · CONNECTICUT ·

DRAWN BY KENNETH CLARK. 1925.

he Scale marked under each part

NORTH EAST ROOM—FIRST FLOOR (PARLOR) THE WEBB HOUSE, WETHERSFIELD, CONNECTICUT

Built, circa 1753

DINING ROOM, THE WEBB HOUSE, WETHERSFIELD, CONNECTICUT

Built circa 1753

"WASHINGTON CHAMBER," THE WEBB HOUSE, WETHERSFIELD, CONNECTICUT

CORNER CUPBOARD

THE MORRIS HOUSE, MORRIS COVE, CONNECTICUT

CORNER CUPBOARD

THE WEBB HOUSE, WETHERSFIELD, CONNECTICUT

LIVING ROOM—GEN. EPAPHRODITUS CHAMPION HOUSE, EAST HADDAM, CONN.

Built circa 1794

COMPETITION FOR A SIX-ROOM SUBURBAN HOUSE

THE NINTH ANNUAL ARCHITECTURAL COMPETITION OF THE WHITE PINE SERIES OF ARCHITECTURAL MONOGRAPHS

Conducted by RUSSELL F. WHITEHEAD, *Professional Adviser*

COMPENSATION TO COMPETITORS

MR. WHITEHEAD agrees to pay to the winners of the Competition, the day following the Judgment of the Jury, the following prizes:

First Prize Design	$1000.00
Second Prize Design	750.00
Third Prize Design	450.00
Fourth Prize Design	250.00
Eight Mentions, Each	50.00

EACH contestant submitting designs in this competition agrees to prepare and furnish to Mr. Whitehead, for a consideration of Four Hundred Dollars ($400.00) by him to be paid, a complete set of seven working drawings (at ¼-inch scale, details at ¾-inch scale) made on tracing cloth, together with an outline specification covering his or her design, within ninety days after June 15th, 1925, if required in writing so to do by Mr. Whitehead within thirty days after said date. Provided further that the working drawings so prepared and furnished are to bear the name of the designer and to become the property of Mr. Whitehead and that the contestant shall make no claims for royalties in case any copies of same are sold.

THE JURY OF AWARD will be composed of Leon N. Gillette, *New York;* Frank Chouteau Brown, *Boston;* Chester H. Walcott, *Chicago;* Laurence Hall Fowler, *Baltimore,* and Carl A. Ziegler, *Philadelphia.*

Mr. Whitehead and the Competitors agree that the Jury has authority to make the awards and that its decisions shall be final.

ARCHITECTS AND ARCHITECTURAL DRAFTSMEN are cordially invited to participate.
Contestants may submit as many designs as they wish.

NOTE: This Competition, having been ruled by a Sub-Committee of THE AMERICAN INSTITUTE OF ARCHITECT'S Committee on Competitions as being of an altruistic or educational nature, is to be treated as an exception within the meaning of the *Circular of Advice and Information Relative to the Conduct of Architectural Competitions.*

Competition closes at 5 p.m. Monday, June 1st, 1925.

THE PURPOSE OF THIS COMPETITION:

1. To encourage the architectural profession to give some of their time and talent to the betterment of the design and plan of small house building, where architecture in its simpler and humbler aspects touches every man, woman and child. As long as so many homes are lacking in real comfort and beauty—as long as so many houses are either commonplace or ugly—so long will architects bewail this lack of architectural taste and appreciation.

2. To obtain a large variety of architecturally good six-room house designs which will be of a higher standard of design and plan than those obtainable without the benefit of competent architectural guidance, and which may serve to teach the man of modest circumstances to appreciate that architects can solve his small problem in the best possible way.

PROGRAM OF COMPETITION

PROBLEM: *Mandatory.* The design of a useful, substantial and attractive six-room suburban house, not over 24,000 cubic feet in size, to be built of wood. The site is a rectangular lot with a frontage on the highway of fifty feet (50 ft.) and a depth of one hundred and fifty feet (150 ft.) with level grades. The highway runs east and west. It is assumed that the adjacent lots are of similar dimensions and that the local restriction provides that no house shall be erected nearer than 30 feet from the highway property line and that no building may be placed directly on either the east or west lot line.

The house is for a small family in moderate circumstances where the expenditure of every dollar is to be most carefully considered, and is to be administered without servants. It shall contain a living

[*Program continued on page 18*]

room, dining room, kitchen, two-fixture lavatory, three bedrooms, one bathroom, entrance into hall, vestibule or living room and a separate service entry. There shall be one closet for each bedroom, a linen closet and a coat closet. No bedroom can be smaller than 90 square feet in area. A cellar is required. If design provides space for room in attic, stairway shall be shown. The design shall provide one open fire place and a porch or porches.

The architectural style is optional, originality and variation of treatment from the traditional, which is sound architecture and shows a proper regard for the qualities of a wood-built house will be welcomed. The designer may select any section of the United States for the location of the house. The territory chosen shall be plainly marked on the drawings.

Due consideration should be given to the lengths and widths of lumber used for floor joists, studs and siding with a realization of those points where the price increases out of due proportion with the increased length and width required. A similar knowledge in regard to standard sizes of doors, windows and glass areas.

COMPUTATION OF CUBIC CONTENTS: Measurements must be taken from the outside face of exterior walls and from the level of the cellar floor in all parts excavated or from the bottom of floor beams in any unexcavated portion to the average height of all roofs. "Average" shall mean a point at half the distance from the top of the wall plate to the top of the ridge. Open porches are to be figured at one-fourth their total gross cubage if they project beyond the main bearing walls, the height to be measured from the finished grade. One-story wings or bays or enclosed sleeping porches two stories high shall be figured at their actual cubage, measurements taken as stated above.

All cubage figures will be carefully checked by a representative of Mr. Whitehead before designs are submitted to the Jury. Designs exceeding 24,000 cubic feet will not be considered.

EXAMINATION OF DESIGNS AND AWARD: The Professional Adviser will examine the designs to ascertain whether they comply with the mandatory requirements of the program and will report to the Jury any instance of failure. The Jury will satisfy itself of the accuracy of the report of the Professional Adviser and will place out of competition and make no awards to any design which does not comply with the mandatory requirements.

The Jury of Award will give consideration to the following:

1. Excellence and Ingenuity of Plans
2. Architectural Merit of the design and its fitness to express a wood-built house.
3. Practicability of Construction.
4. Appropriateness of the Design to the given site.

Excellence of Rendering, while desirable, will not have undue weight with the Jury, in comparison with their estimate of the Competitor's ability if otherwise shown.

DRAWINGS: *Mandatory*. The drawings submitted shall be as follows:

Perspective drawing of house, rendered in pen and ink, projected from a quarter-inch scale plan, clearly indicating the character of the exterior finish.

Plans of the First and Second Floors at one-quarter inch equaling one foot. The walls and partitions blacked in solid and the name and dimensions of each room clearly lettered at a size which can be plainly read when reduced to one-third size of original drawing. The kitchen plan must show the location of range, sink and cupboard. Bedroom plans must show the suggested location of furniture.

Front elevation and one side elevation, at one-eighth inch equaling one foot.

Cross section at one-eighth inch equaling one foot, showing all wall, ceiling and roof heights.

Detail Drawing of Entrance feature at three-quarters inch equaling one foot.

Perspective of an Interior feature at large scale, rendered in pen and ink.

Plot plan at small scale showing location of building on lot and suggesting the location of a Garage and other developments.

Graphic Scales must be shown.

The drawings shall be made in black ink and attractively arranged on two sheets of white paper. Diluted black ink, color or wash will not be permitted and cardboard, thin paper or mounted paper is prohibited. Each sheet is to be exactly 21½ x 27 inches with a single black border line drawn ¾" from edge so that space within the border will be exactly 20 x 25½ inches.

Each sheet shall bear the following title: DESIGN FOR A SIX-ROOM SUBURBAN HOUSE. On the sheet containing the floor plans, in a space enclosed in a plain border is to be printed the Competitor's computation of the total cubage figures, the geographical location of the house and notes suggesting the exterior color scheme.

ANONYMITY OF DRAWINGS: *Mandatory*. The drawings submitted shall bear no name or mark which could serve as a means of identification, nor shall any Competitor directly or indirectly reveal his or her identity to a member of the Jury or the Professional Adviser.

With each set of drawings there must be enclosed a plain opaque, sealed envelope without any superscription or mark of any kind, same containing the true name and address of the Competitor. These envelopes will be opened by the Professional Adviser in the presence of the Jury, after the awards have been made.

DELIVERY OF DRAWINGS: *Mandatory*. The drawings submitted in this competition shall be securely wrapped to prevent creasing or crushing and addressed to *Russell F. Whitehead, Professional Adviser, 150 East 61st Street, New York, N.Y.* The address shall be in plain lettering without any other lettering on the wrapper than such address.

Drawings shall be delivered not later than five p.m. on June 1st, 1925.

Drawings submitted in this Competition are at the Competitor's risk from the time they are sent until returned. Reasonable care will be exercised in their handling and keeping.

JUDGMENT: The Jury of Award will meet at Yama Farms, Napanock, N.Y., June 12th, 13th and 14th, 1925.

REPORT OF THE JURY: The Jury will make a full report which will state its reasons for the selection of the winning designs. A copy of this report will be published by the Professional Adviser. The Professional Adviser will notify all the Competitors the results of the Competition, immediately after the opening of the Envelopes containing the names of the Competitors. The opening of the envelopes containing the names of the authors of the selected designs will automatically close the competition.

COMMUNICATIONS: *Mandatory*. As this Competition is not limited, it will not be possible to answer any communications. Therefore, the Competitors will not communicate on the subject of the Competition with the Professional Adviser, Jury or with any other person in any way connected with it, either directly or indirectly.

THE PRIZE DESIGNS: Are to become the property of *The White Pine Series of Architectural Monographs* and the right is reserved by this publication to publish or exhibit any or all of the other designs. Where drawings are published or exhibited the Competitor's name and address will be given.

RETURN OF DRAWINGS: The authors of non-premiated designs will have their drawings returned, postage prepaid, insured for $50.00 unless otherwise requested.

SPONSORS: Weyerhaeuser Forest Products, George F. Lindsay, President, Merchants National Bank Building, Saint Paul, Minnesota, have authorized this Competition and guarantee full performance of the conditions of the Competition by Mr. Whitehead on his part.

For Outside Finish and for Architectural Detail
There is Still an Ample Supply of Genuine White Pine

By R. G. KEIZER

Eastern District Manager of the Weyerhaeuser Sales Company

NOTE: Much confusion has existed in recent years in the minds of the architectural profession as to just what *Genuine* White Pine really is. Four botanical species of pine have entered into the apparent controversy. Three of these, namely, *Pinus Strobus* or "Northern White Pine," *Pinus Monticola* or "Idaho White Pine," and *Pinus Lambertiana* or "California Sugar Pine," are genuine white pines belonging to the true five-needle White Pine botanical family. The fourth species, *Pinus Ponderosa*, is *not* White Pine but, until recently, has been sold under a variety of misleading and confusing trade names such as "California White Pine," "Western White Pine," "Oregon White Pine," etc., etc. For a number of years *The Monograph Series* has been instrumental in an effort to clear up this confusion and to eliminate the difficulty which has confronted the architect as a result of it. The Montana, Idaho, Washington and Oregon manufacturers of *Pinus Ponderosa* have ceased to use the name White Pine as applied to this wood and are now marketing it to the retailer and millwork manufacturer under the trade name "Pondosa Pine." The California manufacturers of *Pinus Ponderosa* still persist in calling this wood and advertising it under the trade name "California White Pine." It is expected that proceedings recently instituted by the Federal Trade Commission bearing specifically upon this point will result in a ruling which will eliminate this last element of confusion and prevent any manufacturer, agent or dealer from selling any but the genuine species under the name White Pine.

IT is difficult to imagine that one could have followed *The Monograph Series* in its exploration of Early American Architecture without having gained a wholesome respect for White Pine. Had it not been for the lasting qualities of White Pine and for its ability to retain, through the years, the accuracy and sharpness of architectural detail to which it so readily lends itself, much of this old work would have been lost. Therefore, we can assume that the qualities of White Pine are not to be questioned, and that if there is anything more to be said about White Pine it is in reference to its present and future availability and the extent to which a specialized demand has also specialized its distribution.

There need be no argument about the present availability of White Pine in practically all markets. It is being manufactured at the rate of about one billion board feet annually from virgin old growth timber as fine in quality as any that ever grew. And from the best estimates obtainable the remaining supply of White Pine virgin timber is sufficient to support this present rate of annual production for the next eighty years or more. Natural reproduction in the White Pine areas is prolific and with the advent of adequate protection against forest fires and the increasing interest in scientific forest management, it is not unreasonable to expect that by the time our present old growth timber is cut out a new crop will be awaiting us and about ready for harvest. There need never be a time when White Pine lumber is not available to us if as a nation we recognize the importance of scientific forest management and make possible its application as a private as well as a public enterprise.

It should be remembered, however, that this one billion feet of present annual production of Genuine White Pine is sufficient to supply only about one-thirtieth of the total demand made annually upon the lumber industry. Although in the past practically all of the lumber needs of the time were met with it, to-day White Pine can be expected to supply only the more exacting uses for which are required all of the fine qualities that are peculiar to it and for which other less valuable woods cannot be substituted with equal satisfaction.

To this extent Genuine White Pine has become to-day a specialty wood, and its distribution has been specialized also. You will find the better grades of genuine White Pine in the yards of lumber dealers and distributors who serve the exacting demands of numerous industries for foundry flasks and patterns. You will find these same grades in the yards of those lumber dealers and millwork manufacturers who specialize in serving the better class of building trade appreciating its fine quality and willing to pay the price that competing markets may put upon it. Furthermore, in the stocks of the lumber manufacturer at all times there are millions of feet of this Genuine White Pine in the process of seasoning or awaiting orders for shipment and available for the filling of any specifications that cannot be supplied from local stocks.

The Weyerhaeuser White Pine mills are now species marking each piece of the higher grades of both *Pinus Strobus* and *Pinus Monticola* with the name GENUINE WHITE PINE, thus identifying two of the three genuine white pines. If the architect will specify White Pine the Weyerhaeuser organization, the largest producers of the genuine species, will be glad to see to it that the contractor or sub-contractor is given an opportunity to purchase it. The contractor's old and often repeated excuse, "We can't get White Pine" may be refuted by referring him to the nearest Weyerhaeuser Service or Sales Office. The addresses and telephone numbers are given on the inside cover of this journal.

Introducing
PONDOSA PINE

Another Species of Wood of Unusual Merit and of Peculiar Importance to the Designer and to the Manufacturer of Interior Millwork

By R. G. KEIZER

Eastern District Manager of the Weyerhaeuser Sales Company

PONDOSA PINE is not a new wood. On the contrary it has occupied a dominant position in the millwork markets of the country for a great many years. Its annual production is fully twice that of White Pine. The visible supply of virgin standing timber is fully three times that of White Pine. Yet, because it has been sold up to this time under such a variety of trade names, its identity has never been definitely established in the public mind. Therefore, we are introducing on this page not a new wood, but a new name for an old species.

The name Pondosa Pine is derived from *Pinus Ponderosa*, the botanical name of a very distinctive species growing over a wide range of territory extending from Montana westward into Washington and Oregon, and south into California and through the Rocky Mountain region into Arizona and New Mexico. Until recently it has been sold under a great variety of trade names, each of the various producing regions having had its own local name for it. The result from the buyer's standpoint has been the impression of a great variety of different species, whereas, in fact, these various names have all applied to the same wood. There is evidence, therefore, of marked progress in the direction of standardization since the manufacturers of Montana, Idaho, Washington and Oregon, by mutual consent now market this excellent wood under the single trade name, Pondosa Pine.

As a species, Pondosa Pine is of especial importance to the building industry and of peculiar interest to both the architectural designer and to the millwork manufacturer. It is a soft, even textured wood, closely resembling White Pine in appearance, easy to work, capable of moulding smoothly into any form or shape without chipping, and possessing the ability to hold its shape without warping or twisting or grain raising. Furthermore it is a species of wood which by reason of its peculiar forest growth yields in manufacture at the sawmill an unusually large amount of the so-called "factory" or "shop" type of lumber most admirably adapted to the economical operation of the millwork factory. This "factory" or "shop" type of lumber is so called because the knots are so grouped as to afford a high percentage of suitable-length clear cuttings between them. In order to appreciate the significance of this point and the consequent popularity of Pondosa Pine among millwork manufacturers consider that every hundred million feet of Pondosa Pine lumber produced will yield fully three times the percentage of "factory" lumber than can be expected from a similar production of White Pine. More important still, of the highest grade of "factory" lumber required, for instance for door cuttings, this same production of Pondosa Pine will yield more than ten times as much as a similar average production of White Pine. For every hundred million feet of White Pine produced there is twice that volume of Pondosa Pine manufactured, and it is not difficult to understand why Pondosa Pine has found its place in the millwork markets, not only as a first rate wood for the manufacture of interior doors and millwork, but as a decided aid to large scale economical operation of the millwork industry.

While, for exposed uses in damp climates, Pondosa Pine does not have the same remarkable durability as is found in Genuine White Pine, for interior doors, door frames, paneling and trim, it may be questioned if any other wood will ever be found to deliver more complete satisfaction for these uses than Pondosa Pine, properly handled and worked. The architect need have no fear in specifying it for interior woodwork.

Its reasonable price and the growing volume of its production forecast for Pondosa Pine an increasingly important part in the manufacture of high grade interior trim.

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SERIES OF

Architectural Monographs

Volume XI *Number* 3

Early DUTCH HOUSES OF NEW JERSEY

BY

Clifford C. Wendehack

AN

Architectural Monograph

EARLY DUTCH HOUSES OF NEW JERSEY

By Clifford C. Wendehack

Being the THIRD *Number of Volume XI and*
THE SIXTY-FIRST MONOGRAPH OF

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Intimate treatiſes of the ARCHITECTURE of the *American Colonies* and of the *Early Republic* preſented with well ordered completeneſs, to further a broader underſtanding and to create a permanent Record of *Early American* ARCHITECTURE.

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THE KIPP HOMESTEAD ON THE BANK OF THE HACKENSACK RIVER

Built circa 1800

EARLY DUTCH HOUSES *of* NORTHERN NEW JERSEY

By CLIFFORD C. WENDEHACK

THE early architecture found in New Jersey, more particularly on the banks of the Hackensack River, stands apart and distinct from all other types of early American domestic architecture in the United States.

These houses with their quaint gambrel roofs, wide overhanging eaves and broad flat walls of brown stone, have usually been designated as "Dutch Colonial" although this term is incorrect and misleading.

The best examples of the style peculiar to northern New Jersey were erected long after 1664 when Manhattan Island and the surrounding country had ceased to be a Dutch Colony. The style developed slowly, reached maturity in the beginning of the eighteenth century, and attained its highest perfection after the War of Independence.

There is a type of true Dutch Colonial architecture, found in South Africa in the Dutch and Boer settlements which was developed when the veldt was still under Dutch rule. It is a very simple style with low broad walls and simple openings, but it never attained the charm and proportion of the style developed in America.

The Dutch descendants who settled in northern New Jersey, had very little intercourse with their English neighbors to the south in the region of Philadelphia. Living in an isolated manner, these hardy northern settlers expressed in their homes their tenacious individuality, and for several generations adhered very closely to a set type of plan and design. Whether their houses were large or small the same characteristics can be seen in all the work done in this section.

The history of this particular portion of New Jersey along the banks of the Hackensack River, from the town of Hackensack to the New York State line, is most interesting particularly that bearing on the houses under consideration.

The Delaware Indians, among whom was a tribe called the Hackensacks, caused the early settlers considerable trouble, and it was not until the last quarter of the seventeenth century, about 1670, that John Berry an Englishman, and a French Huguenot named Demarest, were each granted an extensive tract of land, comprising what is now the town of Hackensack and the surrounding country. This tract was soon occupied by Dutch settlers from Manhattan. Records bear the date of 1686 when these settlers began to unite into community life, and the beginning of the next century found many prosperous communities of busy farmers with the Dutch habits of thought and expression.

With this element, mingled the French Huguenot strain, descendants from the Demarests, which, however, never became strong enough to dominate the Dutch influence.

Slavery was introduced in New Jersey in 1664, and the land owners were encouraged to increase the number of slaves by a bonus of seventy-five acres of additional land for each slave brought into the colony. Records show that in Bergen County alone there were twenty-three hundred slaves in 1790. This fact has a very important bearing on the architecture of this period, for, being possessed of unlimited, inexpensive labor, the Dutch tendency towards solidity could be indulged in to the utmost. The stone used for the walls of their houses, was in all probability cut and laid by slave labor.

The stone employed is usually called brown stone, and is to be found in great profusion throughout New Jersey. In many localities this brown sandstone is found in ledges and was easily adaptable to the solid flat beds so characteristic of this early masonry.

Stone of irregular size laid in random bond was used generally until the beginning of the nineteenth century when it became a practice to employ cut stone for at least the front and corners with uniform jointing which produces a modern effect in some of the later examples.

The Demarest House on the Saddle River (Plates XXXI and XXXII) is probably one of the most effective illustrations of highly developed stone work. On the rear and ends is demonstrated the earliest type of bonding and irregular laying of stone, and by observation it will be seen that the horizontal beds are maintained throughout in a most exacting manner.

There is abundant proof that practically all of this

early masonry was originally laid in ordinary clay taken from the surrounding fields and mixed with straw. The quality of the New Jersey soil was particularly adapted to this use. Stone work laid in red clay mortar was practically impervious to moisture, and many examples of clay joints in window sills are still intact. At later periods of restoration, most of this stone work was pointed up with lime mortar producing the white joints visible in the accompanying illustrations.

The most characteristic feature of these houses is the enormous overhang and sweep of the eaves. Undoubtedly the Dutch thrift of maintaining property without repairs was responsible for the development of this very charming construction, as it was the means by which water was diverted from the walls of the buildings and prevented the washing out of the clay joints in the masonry.

Assuming that this theory of the overhanging eaves is correct, it is not easily explained why the gable walls were made so extremely flat, in fact, more so than in any other type of early American architecture. However, there was some thought taken to the condition of the gable walls by the fact, hardly without exception, that the gables were covered with shingles and later with clapboards. Thus for purely utilitarian reasons there was developed one of the most charming architectural compositions.

The overhanging roofs were sheathed on the under side with boards and were usually carried out to form a boxed cornice five or six inches deep on the outer edge. On the gable ends a delicately moulded skirt border was generally used and occasionally a small row of dentils is to be found.

When the original cottage grew too small for its owner, a second larger house was built against one end, and in most cases became the main portion of the house and the original building was often changed into a kitchen wing. Frequently a second wing was added to balance the original house. Thus the form of plan so often found was the result of natural growth of the size and prosperity of the family.

A reversed order of building is found in the Terhune House in Anderson Street, Hackensack, New Jersey. The main portion of this house, which is built of brown stone and now white-washed, was built by John Terhune in 1670. In 1800 a descendant of the original owner occupied the house and added a frame wing for kitchen and dining room use.

Irrespective of the period in which the earliest portions of these houses were constructed, there seems to have been a faithful adherence to tradition as to lines and roof pitches which has created an exquisite mass so characteristic of the region. The steeper slope is slightly less than forty-five degrees and the top slope ranges from twenty to twenty-three degrees and is usually quite short.

Around a tradition which permitted in the beginning only the use of local sand stone, many interesting variations in architectural forms employing the native pine are to be found. One of the most interesting is the employment of square wood columns. The original excessive overhang was transformed into a porch and undoubtedly many of the examples, where these narrow columned porches are to be found, were added to at a later date.

The Kipp Homestead on the banks of the Hackensack River is one of the most interesting examples left to us both historically and architecturally. In the gabled end facing the river, we find an example of the natural tendency of these builders to employ masonry wherever possible. We are told that the bricks in this wall were brought from Holland by an early Dutch trader as ballast. The opposite gable is of clapboards; the front and rear walls are surmounted by a most unusual cornice of delicately carved modillions.

Toward the beginning of the nineteenth century, the treatment of doorways, cornices and window openings were given added consideration as may be seen in the Vreeland House (Plates XXVI to XXIX). It is interesting to note in this example the clever use of one and the same set of mouldings throughout and to see what rich and vigorous carving was done with a gouge.

The Lincoln House in Hackensack, originally built by an uncle of John Terhune in 1773, is an excellent demonstration of the softening effect of round pine columns and the more abundant use of wood cornices and gables made possible by a modern restoration of the original sand stone house. The cornice, details and roof lines have been faithfully carried out from the original.

To appreciate these old homes of New Jersey at their best, one must view them in their native landscape amid the rolling slopes and green meadows which have formed their setting for so many generations.

The mellowing effect of time and the elements has brought out the texture of the stone work and in many cases the original wood clapboards or shingles have been left to us without paint, and have mellowed to a golden russet as may be seen on the gable end of the Ackerman House on Polifly Road, Hackensack. (Plate XXII, opposite page).

It would be a noble work indeed if the New Jersey State Board of Architects could acquire some of these finest examples and preserve them intact without mutilation for posterity.

THE ACKERMAN HOUSE, POLIFLY ROAD, HACKENSACK, NEW JERSEY

THE HENDRICK BRINCKERHOFF HOUSE, TEANECK, NEW JERSEY

THE TERHUNE HOUSE, ANDERSON AVENUE, HACKENSACK, NEW JERSEY

Built by John Terhune about 1670

NUMBER 220 GRAND AVENUE, ENGLEWOOD, NEW JERSEY

Built in 1803—*the oldest house in Englewood*

THE VREELAND HOUSE, NORDHOFF, NEW JERSEY

Built about 1818

THE VREELAND HOUSE, NORDHOFF, NEW JERSEY

Front Doorway

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With MEASURED DRAWINGS *from*
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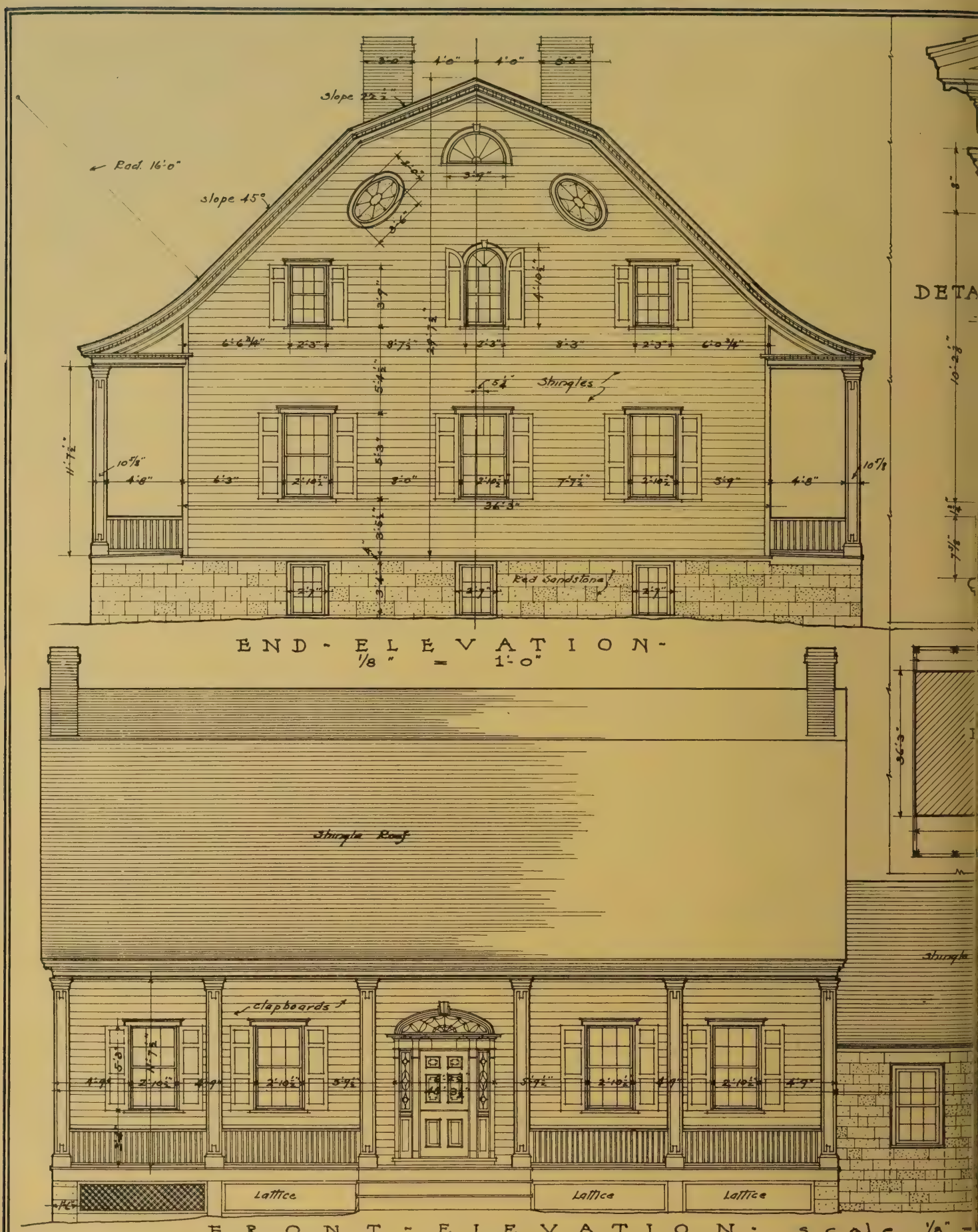
THE VREELAND HOUSE
NORDHOFF, NEW JERSEY

DETAIL OF FRONT ELEVATION



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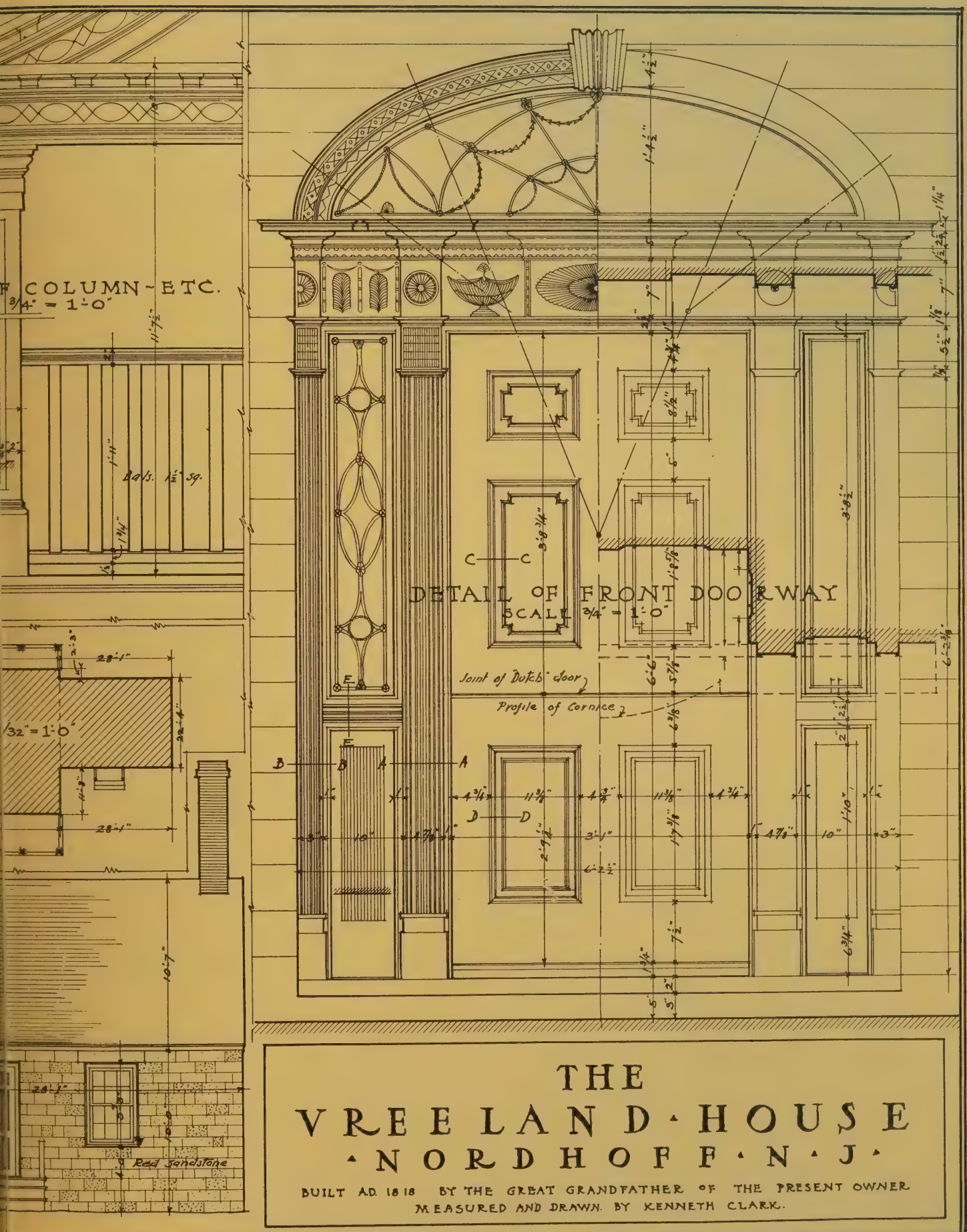

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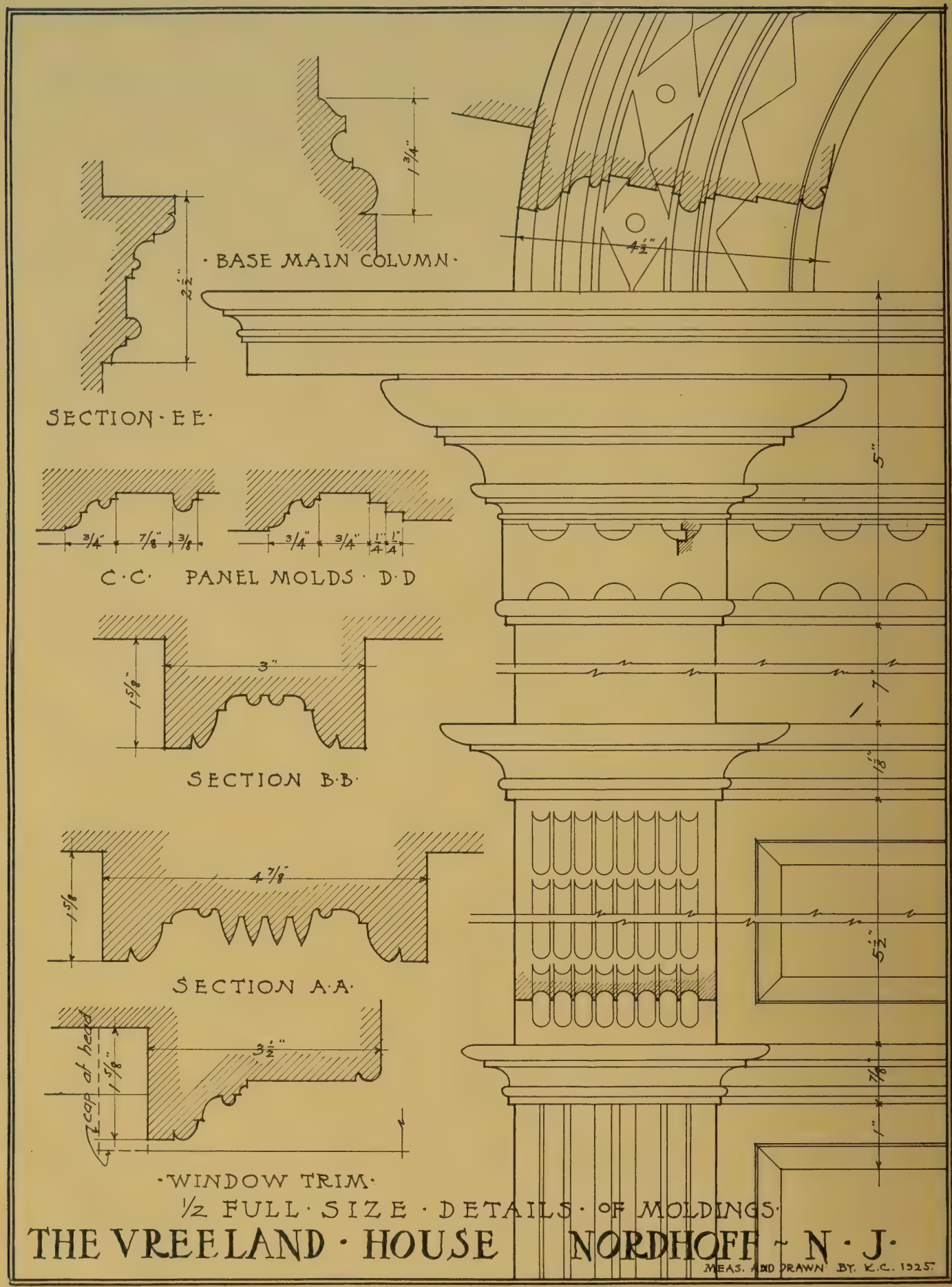

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THE VREELAND · HOUSE NORDHOFF ~ N · J ·

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THE VREELAND HOUSE, NORDHOFF, NEW JERSEY

Detail of Front Doorway

END ELEVATION—THE VREELAND HOUSE, NORDHOFF, NEW JERSEY

Built in 1818 *by the great grandfather of the present owner*

THE HOPPER HOUSE, POLIFLY ROAD, HACKENSACK, NEW JERSEY

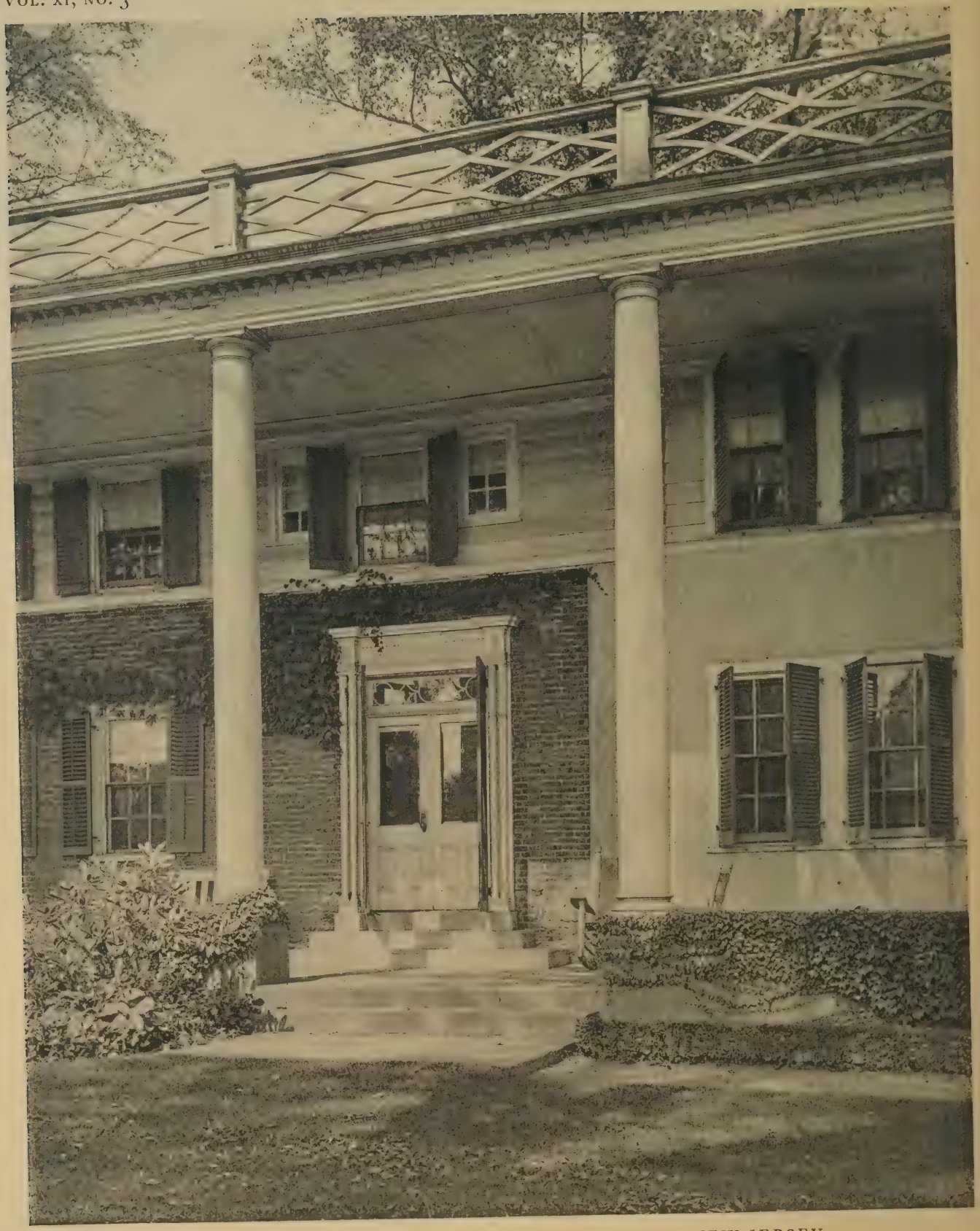
Built during the years 1816-1818

REAR ELEVATION—THE DEMAREST HOUSE ON THE SADDLE RIVER, NEW JERSEY

Built in 1837

END ELEVATION—THE DEMAREST HOUSE ON THE SADDLE RIVER, NEW JERSEY

Built in 1837



THE JOSEPH C. LINCOLN HOUSE, HACKENSACK, NEW JERSEY

Restoration of the original house built by an uncle of John Terhune in 1773

Practical Experiments with Sound Transmission

By R. F. Norris

Mr. R. F. Norris *is a Research Engineer of the C. F. Burgess Laboratories of Madison, Wisconsin. He has been investigating heat and sound transmission for a period of six years. He has developed an improved method of measuring heat flow through thick sections, as well as an Acoustimeter, which measures the intensity of sound very accurately.*

The C. F. Burgess Laboratories is composed of a group of men formerly associated with educational and Government Laboratories, who felt that research work should be able to earn its own endowment. The feasibility of this idea has been demonstrated during the past fifteen years. Editor's Note.

THE definition of sound that one finds in the dictionary is, "Mere empty noise without significance." Possibly this is why so little attention is paid to sound and sound-problems. Of late however, people in general are realizing that sound in its many forms really plays a rather important part in our daily life. Apart from its being our chief method of communication with one another, its presence or absence may directly influence the work we do and the temper in which we find ourselves. A person cannot do efficient brain work in a noisy place.

A beautiful house is just as beautiful architecturally if situated near a packing plant, but no thinking person would build a beautiful house in such a location, no more would he build it near a railroad yard. In one case it would be noisesome and in the other noisy. If we know enough to avoid a railroad yard, why not go a bit farther and build where street noises will not disturb our rest and work. The reason for that is that many of us must live and work in cities where noise is incessant. We cannot move "far away from the maddening crowd." The only recourse then is to so build our buildings that the noise shall be kept in its proper place and not allowed to enter our offices or dwellings to annoy us. This we do not know how to accomplish. We will agree that if the walls of a building are made massive enough and without openings, the sound will be effectively shut out, but we cannot build that way for obvious reasons. First expense, and second structural difficulties. Our modern types of construction are very efficient as far as strength, rigidity and ease of artistic treatment are concerned but they unfortunately seem to be fairly decent sound transmitters. The problem of making them more dead is one of great importance and one of which the fundamental considerations are little known. We do know however, that if we furnish a room properly, the sounds that leak in from the outside may be so reduced in intensity as to become unobtrusive. Thus a room furnished with heavy drapes, stuffed furniture and thick rugs placed over proper liners, will seem to be immeasurably more quiet than one subject to the same noises, if it is sparsely furnished.

A great deal has been done in studying the effects of sound absorbers in the quieting of rooms and their acoustic correction, in other words in the control of the sound after it is in the room. This is an important branch of the subject. It allows auditoriums to be so built that the entire audience may hear the program without the accompanying effort to hear, when echoes and reverberations almost make it impossible. School rooms may be built and designed so that the boy in the back seat has as good a chance of learning as the boy in the front seat. Unfortunately this matter is almost universally neglected in our public school buildings.

This matter of absorbents and acoustics is fundamental, but the biggest problem confronting builders today, is not how to treat the sound after it is in a certain room, but rather how to keep it out of the room in the first place.

The problem of determining the effect of different insulating materials placed in standard frame walls and floors was put up to the C. F. Burgess Laboratories. The first thing necessary for the study of this problem was a device by which the intensity of the sound transmitted by the walls or floors could be accurately measured. After a great deal of study, and the building of numerous instruments, most of which were found to be valueless for the purpose intended, an electrical device, which has been named an Acoustimeter, was evolved, that actually measures the sound transmitted by a wall or floor, accurately and consistently.

When this was proven, wall sections and floor sections were built in which various insulations were incorporated in different positions. The sound transmitted by each of these sections was measured and a study of the results indicated that the hollow spaces in a wall or floor could be regarded as small rooms into which the sound entered through one wall, built up to a maximum volume and then passed on through the other wall. It seemed that if absorbent materials were introduced into the small rooms or spaces the intensity to which the sound would build up would be greatly reduced and as a consequence there would be less sound to be sent on through the opposite wall. The absorbent value of various insulating materials was determined and

[*Advertisement*]

they were incorporated in identical floor sections. The data collected seemed to bear out this theory since the most absorbent material, namely, Balsam-Wool, produced the most deadening in the floor.

Balsam-Wool was then put into wall and floor sections in various manners and the best method of application was sought.

It was found that joist pads in floor construction were of no value in stopping sound. This would be expected as they introduce practically no absorbent material into the hollow spaces of the floor. The most efficient method of applying an absorbent insulator was found to be its application to the under side of the floor joists with furring strips which in turn carried the lath for the ceiling. It was also found that when more than one layer of insulation was used, each layer cut down the transmitted sound considerably. Finally the construction was changed so that the ceiling was carried on an entirely different set of joists from those that supported the floor. When insulation was introduced into this construction a sound reduction of 89 per cent was effected. This is so great a part of the sound incident on the sections that a building built in this way is for all practical purposes sound proof. In conjunction with this floor construction a double staggered stud construction was used, which cut down the transmitted sound 77 per cent. If all apartment houses employed these constructions the noisy apartment would be a thing of the past.

In the Laboratory a rather surprising fact was brought to light. If a rigid board type of insulator is incorporated in a floor, the floor will transmit more sound than the same floor without the insulator. This did not seem reasonable at first and repeated tests were made to study this phenomenon. In all cases the results were the same. The acoustimeter was then rebuilt in a portable form, and a number of measurements were made in floors actually in place in finished buildings. In general the Laboratory tests were further substantiated by these tests of actual floors. It was interesting to note that in one Chicago apartment house, where board form insulation had been used, in the upper floors, that the uninsulated first floor showed considerably less sound transmission than the insulated floors.

In these tests run on completed houses, it was found that the depth and span of the joists, the distance between centers of the joists, the quality of the bridging and the tightness of the rough floor had a great influence on the amount of sound transmitted by the floors. In each case the construction which tended to give the most rigid building, proved to have the best sound insulating value. It is safe to generalize and say that a cheaply constructed building will be noisy. Even in the cheapest construction, however, the reduction of transmitted sound due to the insulation used was found to agree with the factors determined in the Laboratory tests. It was conclusively determined that the so-called deadening felt generally put between rough and finish floors has no value as a sound deadener although it does perform a valuable function in not letting the accumulated dust sift through the rough floor.

While this investigation of the proper way to build more sound proof walls and floors was undertaken at the request of a client, the Laboratory has found it so interesting and fundamental to the health and peace of mind of the American people that the work is being continued. A great number of measurements are being made of factors and walls of known construction.

When a sufficient mass of data is collected it is hoped that something more definite may be evolved in the method of building houses, apartment and office buildings. Buildings which while not as, "quiet as the tomb," will at least be quiet enough to rest weary nerves and will be conducive to thought and efficient labor.

Balsam-Wool—*Building Insulation*

BALSAM-WOOL has been proved by laboratory and field tests to be the most efficient building insulation available. Balsam-Wool is thoroughly practical; it has the qualities absolutely necessary where an insulating material is built into the walls, partitions, floors and roofs of a building to offer resistance to the transmission of heat, cold and sound. It is permanent, waterproof, fire resistant, vermin proof and sanitary.

Balsam-Wool is made of cellular wood fibres, each fibre coated with an adhesive which cements it to adjacent fibres, permanently matted together in blanket form and packed between two coverings of tough kraft paper, lined with films of asphalt coating. A wood product, Balsam-Wool has the advantage of all the insulating properties of wood multiplied many times by the re-arrangement of the wood fibres into a fleecy substance resembling sheep's wool in both appearance and insulating efficiency. Millions of dead air cells are contained in every square foot of the material which retards the circulation of air, makes it light in weight, flexible and of low density.

There is *no stitching* required in the manufacture of Balsam-Wool and the strong paper liners are not punctured in any way, adding further to its resistance to the passage of both heat and moisture.

The two waterproof films of asphalt between the "wool" and its outside paper covering provides a permanent bond between the "wool" and paper; protects the substance from moisture and assures its high insulating properties throughout the life of the building and serves as well to keep out dampness, wind and dust.

Balsam-Wool is chemically treated to make it fire resistant. It will char while exposed to flame but it will not smolder or burn after the flame is removed. Balsam-Wool in itself will not support combustion.

Balsam-Wool does not attract or harbor rodent or vermin. It is clean and odorless.

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Sound Deadening of Floors and Partition Walls

Test Results Showing Relative Efficiency of Various Insulating Materials in Floated Floor Type of Construction

The table opposite shows results of tests on actual floor sections conducted by the C. F. Burgess Laboratories for the Wood Conversion Company, Cloquet, Minnesota

Manufacturers of

Balsam-Wool

The amount of sound transmitted through a floor section with no insulation was taken as 100% sound transmission. The various insulating materials were rated against this figure.

Insulation	Thickness	Per cent of Sound Stopped Due to Insulation	Per cent of Sound Transmitted
Balsam-Wool	½"	38	62
*G	½"	36.5	63.5
*F	½"	34.4	65.6
*B	½"	26.	74.
*C	½"	24.7	75.3
*A	2 ply	20.4	79.6
*D	½"	18.1	81.9
*E	½"	4.4	95.6

*Insulating materials in competition with Balsam-Wool.

Note: The construction of the floor sections and apparatus used for measuring the sound transmitted are fully described in Technical Sheet No. 3 contained in Balsam-Wool Folder—A. I. A. File No. 37b.

Test Results Showing Relative Sound Deadening Efficiency of Various Types of Floor Construction Insulated with Balsam-Wool

Solid black in Figures 2 to 8 indicate Balsam-Wool Insulation.

The amount of sound transmitted through a floor section constructed in the usual manner, as illustrated in Figure 1 and without any insulation was taken as 100% sound transmission. The various types of floor insulated with Balsam-Wool were rated against this figure.

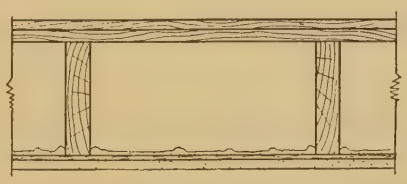

Fig. 1
Per cent of Sound Transmitted 100 Per cent of Sound Stopped 00

Fig. 2
Per cent of Sound Transmitted 85 Per cent of Sound Stopped 15

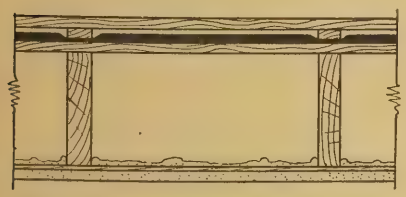

Fig. 3
Per cent of Sound Transmitted 57 Per cent of Sound Stopped 43

Fig. 4
Per cent of Sound Transmitted 48 Per cent of Sound Stopped 52

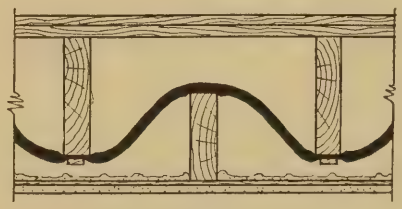

Fig. 5
Per cent of Sound Transmitted 25 Per cent of Sound Stopped 75

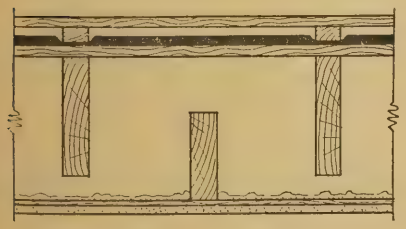

Fig. 6
Per cent of Sound Transmitted 16 Per cent of Sound Stopped 84

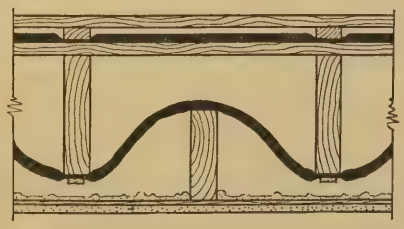

Fig. 7
Per cent of Sound Transmitted 14 Per cent of Sound Stopped 86

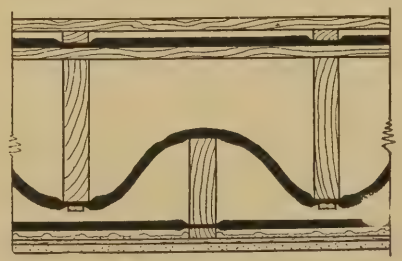

Fig. 8
Per cent of Sound Transmitted 12 Per cent of Sound Stopped 88

Note: The construction of the floor sections and the apparatus used in arriving at the above sound transmission values are described in Technical Sheet No. 3 contained in the Balsam-Wool Folder—A. I. A. File No. 37b, Document No. 172. Revised 1925.

[*Advertisement*]

[*Continued on following Page*]

Test Results Showing Relative Sound Deadening Efficiency of Various Types of Partition Walls Insulated with Balsam-Wool

Solid Black in Figures 9 to 14 indicates Balsam-Wool Insulation

Fig. 9

Per cent of Sound Transmitted 72 Per cent of Sound Stopped 28

Fig. 10

Per cent of Sound Transmitted 52 Per cent of Sound Stopped 48

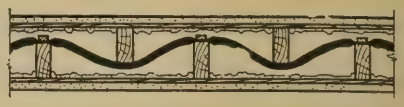

Fig. 11

Per cent of Sound Transmitted 43 Per cent of Sound Stopped 57

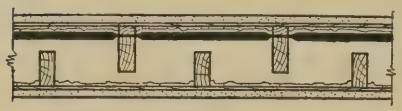

Fig. 12

Per cent of Sound Transmitted 52 Per cent of Sound Stopped 48

Fig. 13

Per cent of Sound Transmitted 27 Per cent of Sound Stopped 73

Fig. 14

Per cent of Sound Transmitted 23 Per cent of Sound Stopped 77

Note: The wall sections used in arriving at the above values were made using Gypsum board 3/8" thick instead of the lath and plaster shown here so that absolutely uniform results could be obtained. The Gypsum board was applied to the studding using the same nail pressure in all cases.

Standard Specifications for the Application of Balsam-Wool *for Sound Deadening*

FLOORS

MATERIAL: Sound deadening material (insulation) shall be standard ½" thick Balsam-Wool, 32" wide, manufactured by the Wood Conversion Company, Cloquet, Minnesota.

GENERAL: Continuity of the sound deadening material shall be maintained—all joints shall be sealed.

Where false ceiling construction is used (ceiling joists independent of floor joists) and sound deadening material or insulation is woven between the two sets of joists, insulating strips shall run at right angles to joists with edge laps of at least 1½". Tension on all strips shall be as nearly equal as possible to guard against open joints at edge laps.

Insulation strips applied over sub-floor or on bottom of joists, shall run in the same direction as joists.

Use full length strips of insulation. End joints where necessary shall be lapped 1½" and covered with lath nailed through insulation to sub-floor, joist or header.

Where specified there shall be constructed a false ceiling; the joists to support the floor and those carrying the ceiling being independent. The ceiling joists shall be set midway between the floor joists with bottoms at least 1½" below the bottom line of the floor joists where woven insulation is used.

PARTITION WALLS

MATERIAL: Sound deadening material (insulation) shall be standard ½" thick Balsam-Wool, 32" wide, manufactured by the Wood Conversion Company, Cloquet, Minnesota.

GENERAL: Continuity of the sound deadening material shall be maintained—all joints shall be sealed.

Where floors and ceilings are insulated, as well as partition walls, insulate walls thoroughly between joist ends.

Where double partition (staggered stud) construction is used and sound deadening material or insulation is woven between the two sets of studding, insulating strips shall run horizontally at right angles to studs, with edge laps of at least 1½". Tension on all strips shall be as nearly equal as possible to guard against open joints at edge laps.

Insulation strips applied on the face of studding shall run vertically in the same direction as the studs.

Use full length strips of insulation. End joints, where necessary, shall be butted and covered with lath nailed through insulation to stud or header.

Where specified, there shall be built double partition walls of staggered stud construction, each set of studs set 16" O.C., the one set of studs centering between the other. On the same side of the partition there shall be at least 1½" from the face of one set of studs to the face of the other where woven insulation is used.

BALSAM-WOOL is made in three Standard Widths—17", 25" and 32". Standard Thickness ½"

Every roll of Balsam-Wool bears the Weyerhaeuser Forest Products *trade-mark, the maker's pledge of personal responsibility.*

Note: Complete detailed information for the Drafting-room and Specification writer concerning Balsam-Wool for Heat and Sound Insulation is given in Technical Sheets Nos. 1, 2 and 3 contained in the Wood Conversion Company Folder—A. I. A. File No. 37b.

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Architectural Monographs

Volume XI *Number* 4

Late Eighteenth Century Architecture IN Western Massachusetts

BY

Ernest Newton Bagg

AN

Architectural Monograph

LATE EIGHTEENTH CENTURY ARCHITECTURE IN WESTERN MASSACHUSETTS

By Ernest Newton Bagg

Being the FOURTH *Number of Volume XI and*
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THE BOICE (RICE) HOUSE, SOUTH PLEASANT STREET, AMHERST, MASSACHUSETTS

Built by Horace Kellogg about 1828

Late Eighteenth Century Architecture In Western Massachusetts

By Ernest Newton Bagg

THE Pilgrim Fathers, by reputation straight-laced and quite given to denying themselves and families many things which would not be termed extravagances by moderns, had many redeeming qualities, among them a shrewd and calculating intelligence and unquenchable ambition.

The Connecticut Valley settlers, once in possession of their rugged and somewhat threatening promised land, were for only a short time content with their primitive shelters and hastily thrown-together barricades. Some of their earliest buildings suggest the severe outlines of such structures as the gloomy gaol in that old Chelmsford-Springfield whence came many settlers of this region. That is, from the town, not the gaol!

The proper cultivation of newly-cleared land, and study of the elements necessary to make it produce food in the shortest possible space of time interested these pioneers far more at that time than what style of house would best suit each man's particular corner of the lovely New England landscape. Their sterling women-folk were undoubtedly prime and potent factors in the inevitable reaction. Windows here, conveniences for housekeeping there, enlargements of space in first one direction, then another, and most of them suggested by necessity. These changes increased with the lessening of danger from terrors by night and arrows by day. The tendency toward lines of beauty in building at first showed itself as a matter of course, with the wealthier immigrants, whom their neighbors were not slow to imitate. Ornament as well as utility was added as each settler prospered and felt that he could afford to do so. The decades swiftly passed and it can not be denied that now-existing examples of western New England home-building possess many features of artistic as well as purely architectural charm.

Among leaf-embowered homesteads on each side of Longmeadow's principal street—a veritable "royal greensward, fit for camp of kings"—one of the glimpses longest remembered by tourists with an eye for sheer beauty of setting, is the Alexander Field house.

Anciently the Indian "Massacksic," this was "land to be desired" indeed! It was this same broad, ample stretch of "ye longe meddowe" lying next south of the 1636 Springfield plantation, which attracted the shrewd settlers. It should be recorded that they very early showed signs of appreciation of beautiful home-site surroundings, and were ill-content with lands mainly suitable for farming.

Quaint old records show how, in 1703, Daniel, Benjamin and Lieut. Joseph Cooley and a dozen neighbors in the lowlands next the "Greate River" petitioned the parent town for leave to possess home-lots on "Convenient and better land out of the general field, on the hil," because floods have "put or Lives in grt Danger, or housing much damnifyed, & many cattle are Lost." The Alexander Field house stands upon the original six-lot grant assigned to the Cooleys. This grant extended for 120 rods along the ancient "commons" highway, laid out 330 feet wide—and almost as far back towards the river. The Field family arrived in Longmeadow about 1728, and through marriages with the Cooleys came into possession of the site near the head of magnificent Longmeadow Street.

Scarcely a mile in a bee line (thrice that around by nearest bridge way) lies the eldest settlement of western Massachusetts, Agawam; first choice of the pioneers as a site for Springfield. The first dwelling in this region erected by white man was the rough shelter placed in the famous "House meadow" at the north end of Agawam, by William Pynchon's henchmen, Cable and Woodcock, in the summer of 1635. It was abandoned within the year because of the danger from floods; and the Springfield River bank was for the next two centuries the heart of "town," since 'twas ever best to be on the safer side. It is architecturally interesting to note in passing that the next year's record states that this house was "built at the common charge for six pounds!"

In the heart of the old town, on the east side of the

wide, elm-arched street where, on the afternoon of June 30, 1775, General Washington passed, bound for Cambridge where the new Continental Army awaited its commander-in-chief, stands the fine old Leonard dwelling built in 1808. Both upstairs and down, the middle section of the house is all hallway, about twelve by forty feet, with handsome panelled doors leading into ample rooms on each side. Some of the big fireplace openings have the wide flagging hearthstones fitted into the flooring, the latter still containing many of the original broad boards. On the ground floor the doors, cut in half, allowed the serving of flip and cider over the lower closed part. "Side-fire" bake-ovens, hand-wrought door-latches, and nail-heads, and hand-hewn foundation timbers are interesting features of this one of the most substantial houses of its era in Agawam. A curious detail of the side door (Plate XLIII) is the hinged halving, from top to bottom rather than the frequent side-to-side treatment. Old residents aver that the latch-half of the door was opened mainly to answer inquiries; and that the full forty inches of opening was thrown wide when answers and inquiries proved satisfactory to all concerned.

West Springfield, which once included in its twelve-mile length both Agawam and Holyoke is now separated from the former by the Agawam River. In the eastern edge of its central part, on a lordly location overlooking miles of Connecticut River valley, and directly across the river from Dr. J. G. Holland's famous "Brightwood", stands the old First Congregational Church, the corner stone of which is marked "June, 1800." The townspeople of that day had long been dissatisfied with the primitive "church-on-the-common," forty-two feet square and built a century before that. John Ashley, a prosperous parishioner, seeing the inhabitants could not agree upon a location for a more modern building, terminated a long and rather violent controversy on the question, by coming forward with an offer of thirteen hundred pounds on condition that the "spacious and elegant meeting house" of the photographs should be placed "on a spot designated by me": and thus the old "white church on the hill" came into being, where all the different factions of town could look up to it. It was built "on honor" as well as on a foundation of red sandstone; and its hand-hewn timbers of white oak are found to be sound and staunch to this day. The very young contractor, Captain Timothy Billings of Deerfield, aged twenty-eight! received about $1400—part of it in St. Croix rum—for building it. Ashley and Billings, consulting with the famous Dr. Lathrop, who was then minister of the church, were responsible for its architecture, which has been greatly admired. In style it is a rather less severely simple modification of the Christopher Wren pattern, examples of which are quite numerous in New England.

Another condition made by the donor of the money for this church was that the building should be used as a church for a hundred years. After a full century, plus a dozen years more for good measure, it was sold to become a Masonic temple; and another church building was adopted close to the historic spot where the ancient building of controversy had been established. Sacred relics of the beautiful old church on the hill, such as carved ornaments from the sides of its high square pulpit, and panelled pew doors, have been built into some of the houses of the neighborhood, as a reminder of the "Mt. Orthodox" that used to be!

Old Hadley, and that newer part long known as East Hadley—which is now Amherst—have some charming old dwellings, with the hip and gambrel roof as well as fan-light suggestions of the good taste and imagination of the elders in architecture. The houses were first of all built to withstand the rigors of the once savage New England winters, and moreover were built to last. They blossom out, unexpectedly, into fanciful bits of ornamentation here and there, some perhaps accidental, but many more by design.

The old Boice place, on South Pleasant Street, Amherst, now owned and occupied by the Rice family, is one of the particularly noteworthy specimens of late eighteenth century home-building. It was built about 1828 by the farmer-carpenter, Horace Kellogg. That he was a man of uncommonly good judgment becomes apparent when it is known that he was on the building committee having in charge the erection of the much-admired third building of the First Congregational Church; the same which was transformed into what is now the stately College Hall. Other specimens of the Kellogg taste in such matters are found elsewhere in the eastern part of Hampshire County in buildings which not only wear but look well with which he had to do either as a builder or in an advisory capacity. The family of Sanford Boice, by which the place is now generally known, occupied it for the first twenty years of the present century.

The Hubbard house (Plate XLIV) in Northampton, so called from one of its earlier owners, was built in 1744 by a grandson of Cornet Joseph Parsons to whom the original grant of land was made and who was slain by the Indians of King Philip in 1675. As a precaution against Indian attack by day (the last recorded tragedy from this source was the killing of Elisha Clark of Northampton, August 1747) strong wooden shutters were placed in front of each first floor window.

THE FIRST CONGREGATIONAL CHURCH, WEST SPRINGFIELD, MASSACHUSETTS

Built in 1800 *to replace first "Church-on-the-Common" built in* 1702

DETAIL OF SPIRE—FIRST CONGREGATIONAL CHURCH, WEST SPRINGFIELD, MASS.

The bell in the tower was recast from the one used in the 1702 church

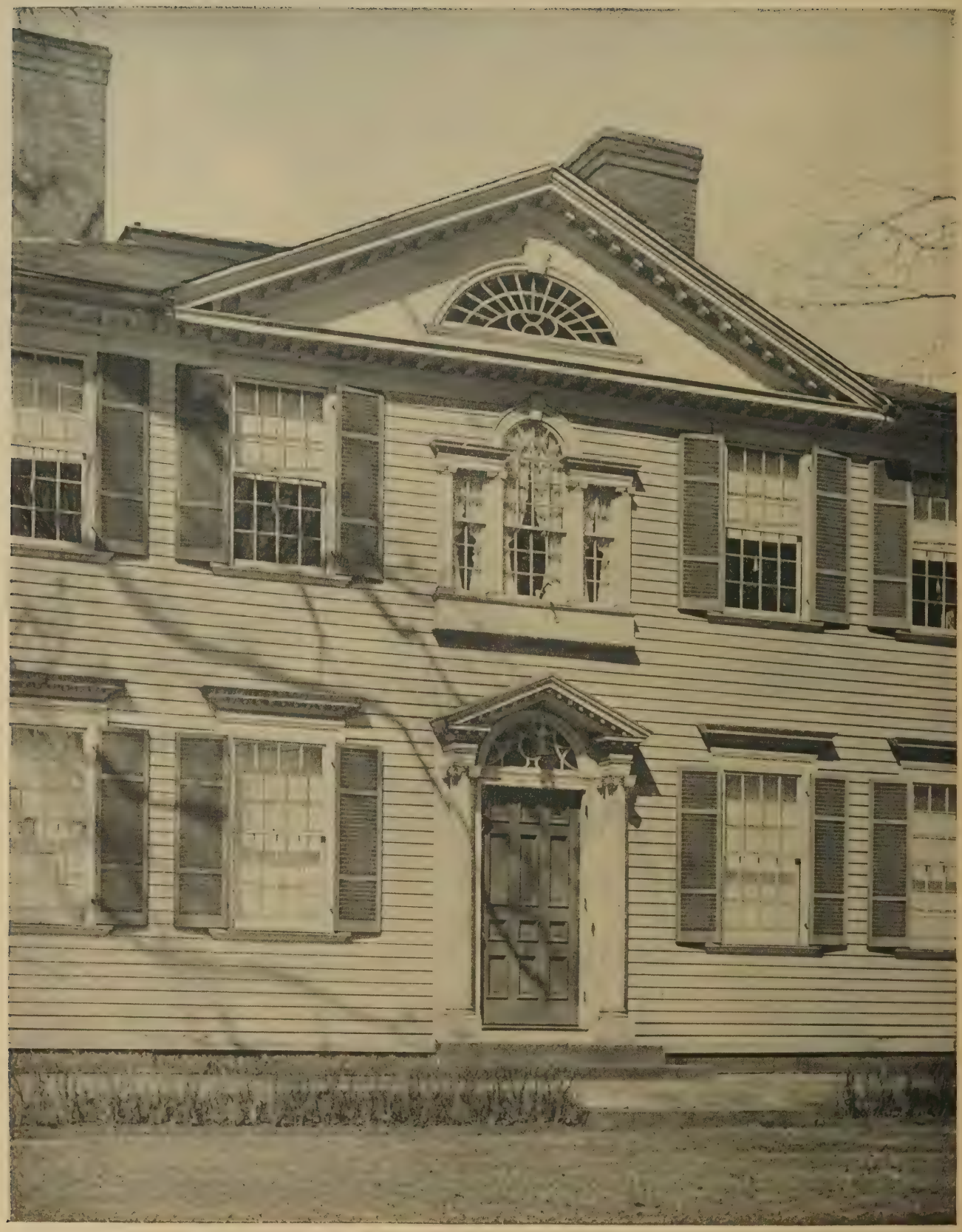
THE CHARLES LEONARD HOUSE, AGAWAM CENTER, MASSACHUSETTS

Built in 1808 *on the Agawam Commons*

THE CHARLES LEONARD HOUSE, AGAWAM CENTER, MASSACHUSETTS

Built in 1808 *by Chas. Leonard, a farmer-graduate of Harvard, at one end of his great farm*

THE FIELD HOUSE, LONGMEADOW, MASSACHUSETTS



THE FIELD HOUSE, LONGMEADOW, MASSACHUSETTS

Detail of Central Portion of Main Facade

The WHITE PINE SERIES *of*
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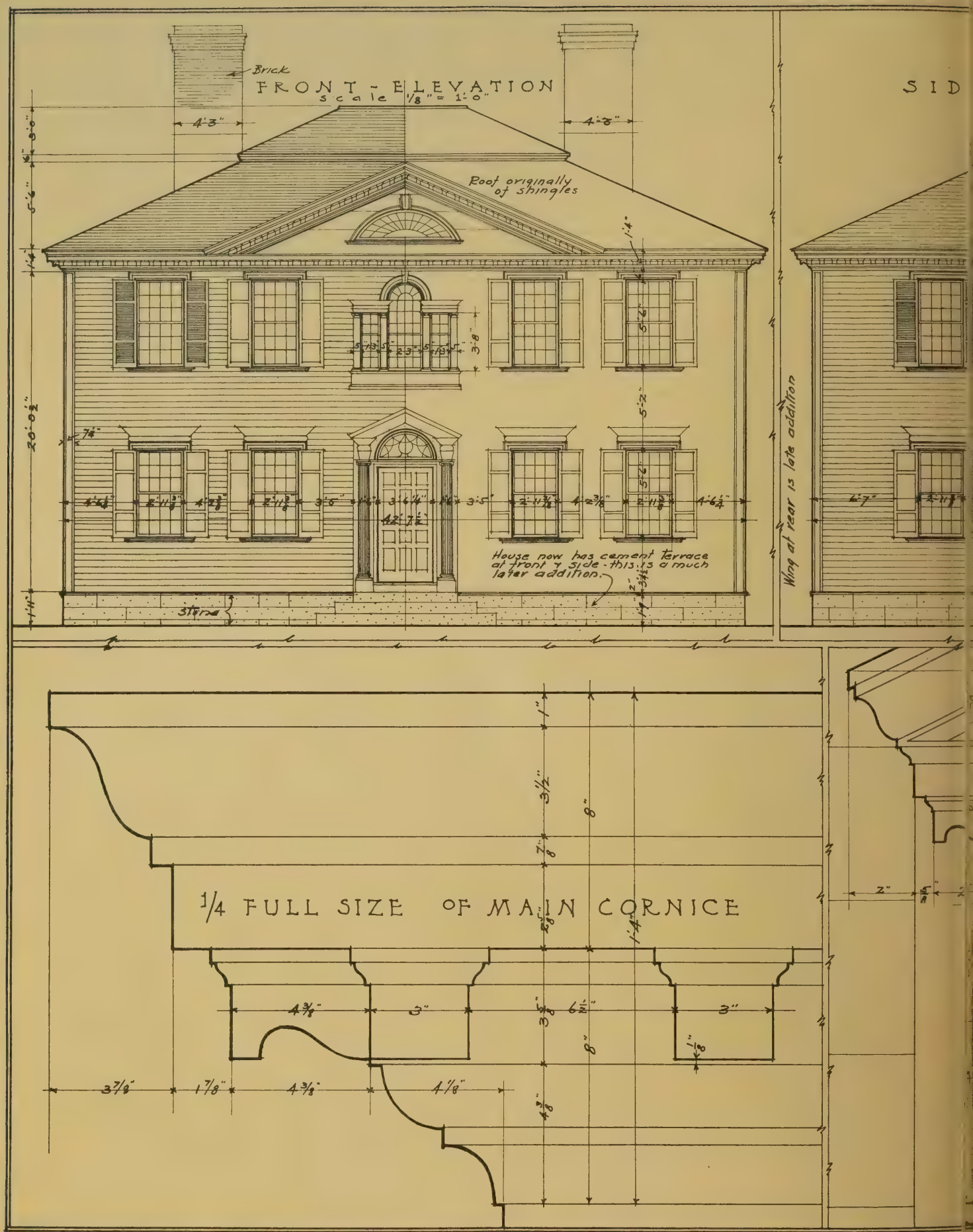
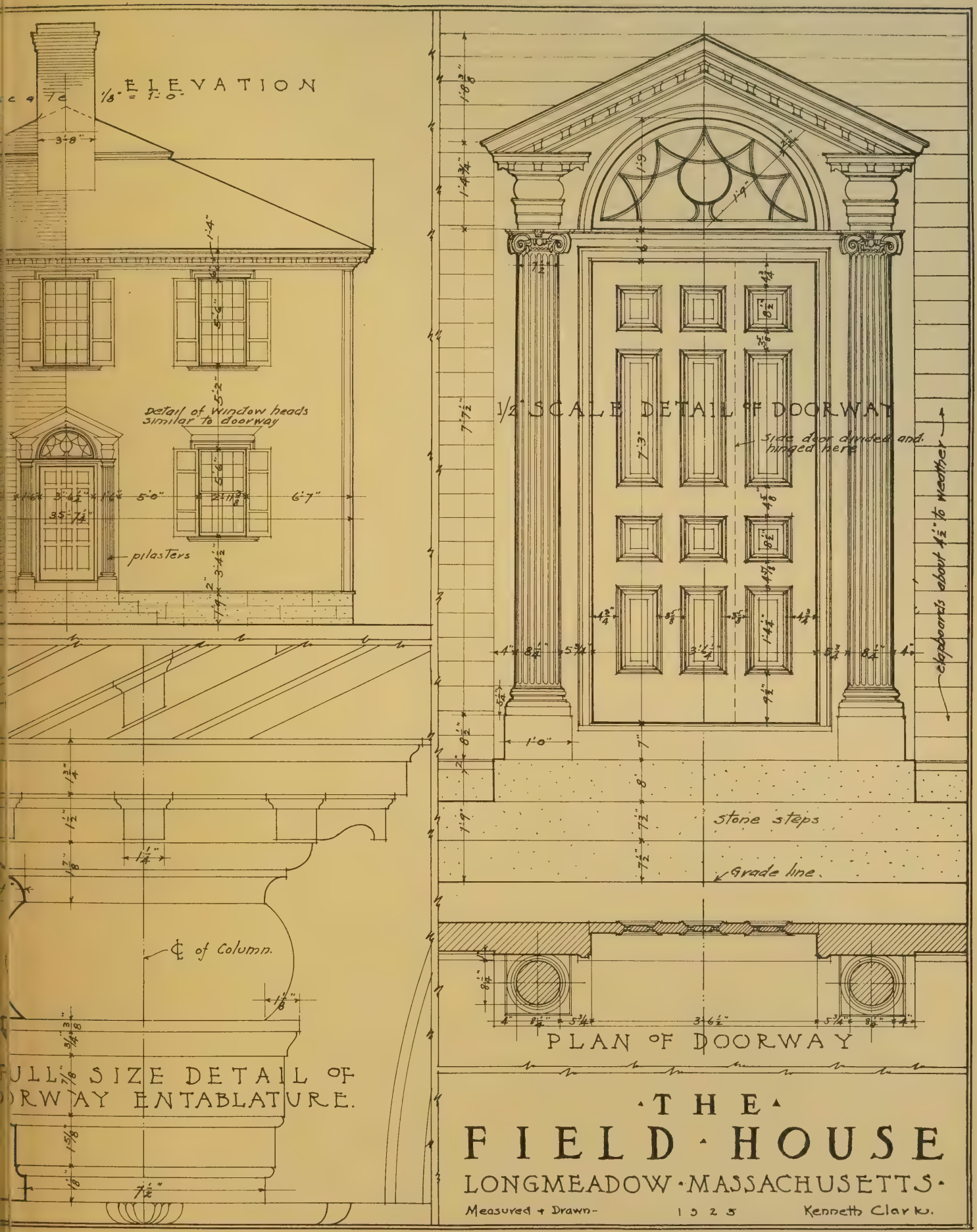
THE FIELD HOUSE
LONGMEADOW, MASSACHUSETTS

DETAIL OF COLUMN AND ENTABLATURE—FRONT DOORWAY


Brick
FRONT - ELEVATION
Scale 1/8" = 1'-0"
SID
Roof originally of shingles
House now has cement terrace at front & side - this is a much later addition.
Wing at rear is late addition
1/4 FULL SIZE OF MAIN CORNICE

These Drawings are reproduce



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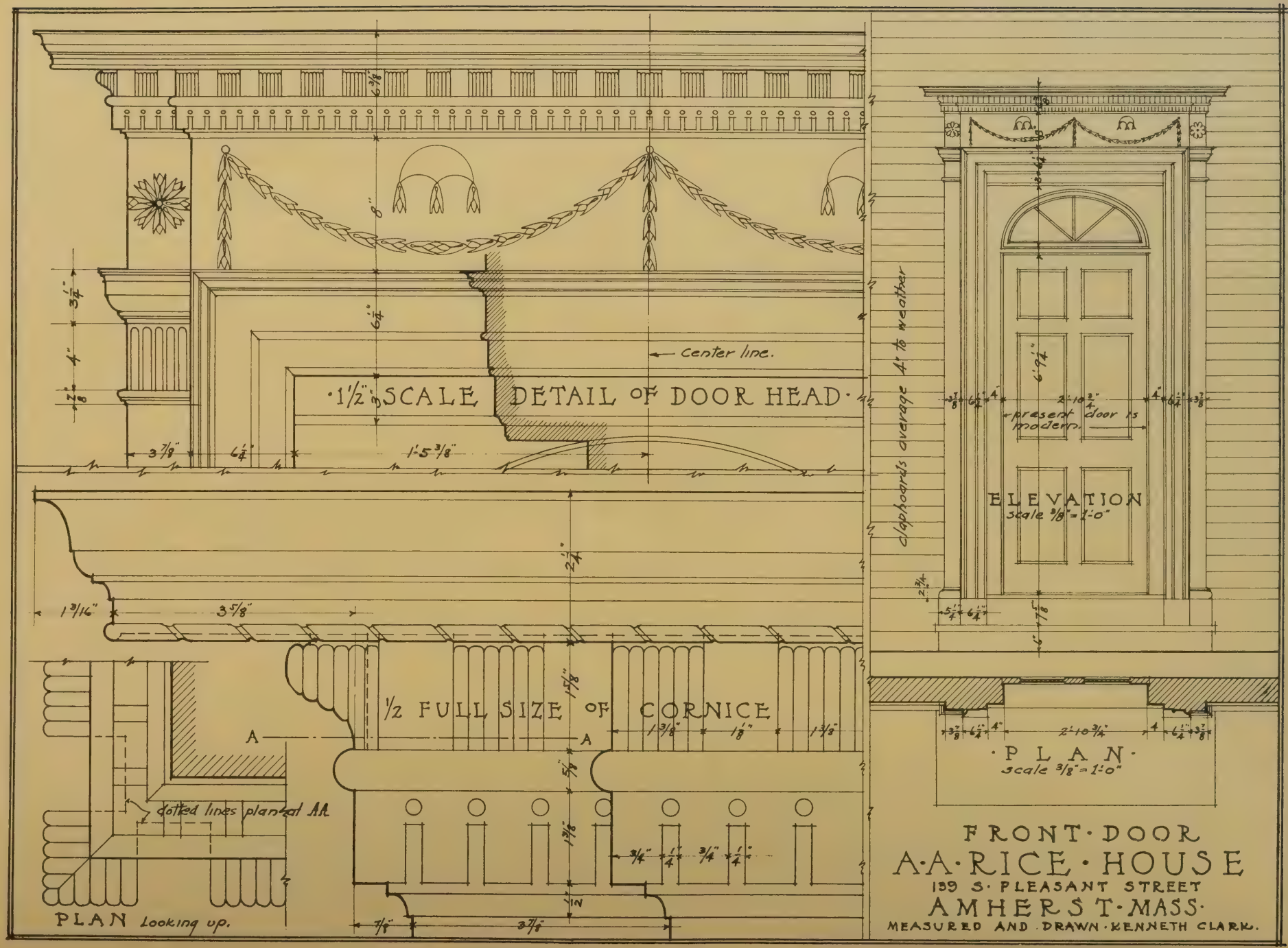

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DETAIL OF FRONT DOORWAY—THE BOICE (RICE) HOUSE, AMHERST, MASSACHUSETTS

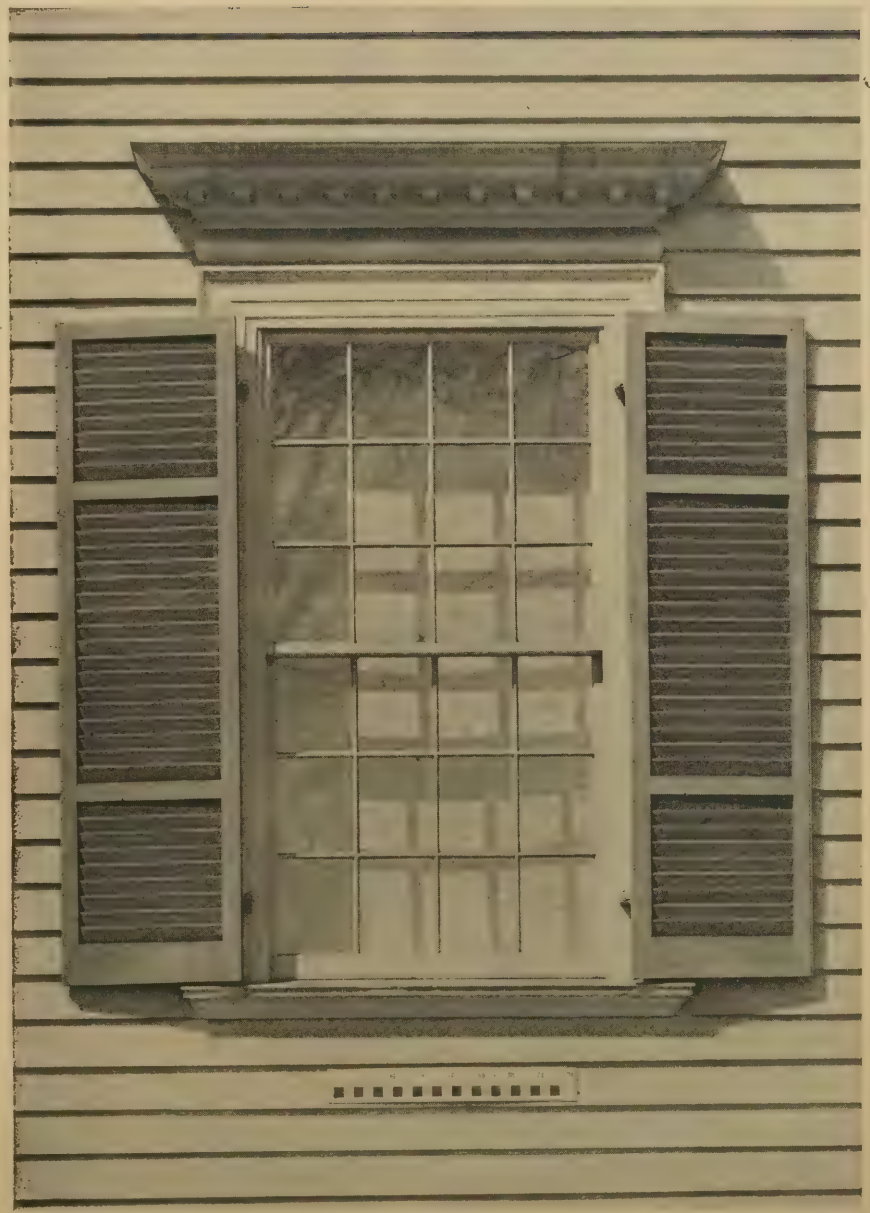
FRONT ELEVATION—THE BOICE (RICE) HOUSE, AMHERST, MASSACHUSETTS

Detail of Side Doorway

THE FIELD HOUSE, LONGMEADOW, MASSACHUSETTS

Detail of Side Doorway

THE LEONARD HOUSE, AGAWAM CENTER, MASSACHUSETTS



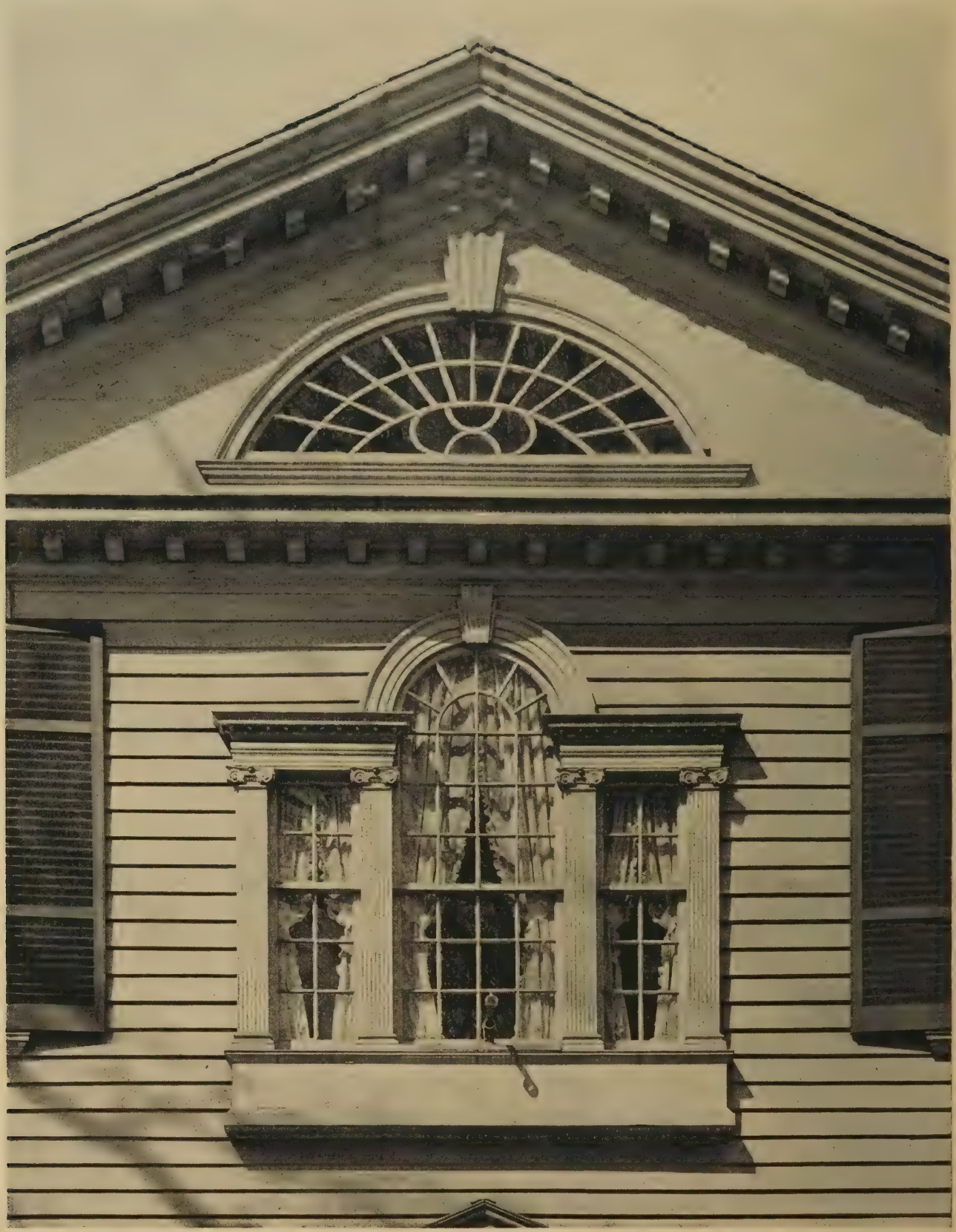
Detail of Window

THE FIELD HOUSE, LONGMEADOW, MASSACHUSETTS

Detail of South Window—Built in 1744 *by Josiah Parsons*

THE HUBBARD HOUSE, NORTHAMPTON, MASSACHUSETTS

SIDE ELEVATION—THE FIELD HOUSE, LONGMEADOW, MASSACHUSETTS



CENTRAL MOTIVE—THE FIELD HOUSE, LONGMEADOW, MASSACHUSETTS

DOUGLAS FIR

Some Pertinent Facts about its Attributes and Various Uses

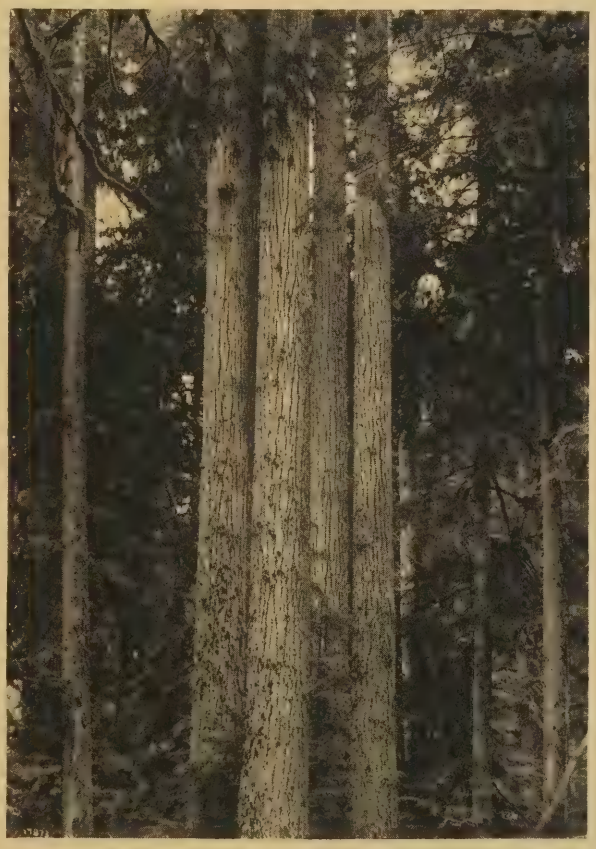
In 1899 Douglas Fir constituted 6.6% of the total softwood lumber production. To-day it is nearly 30%. In 1915, after the opening of the Panama Canal, the Atlantic Coast received approximately 86 million feet of Pacific Coast lumber, principally Douglas Fir. 925 million board feet went through the Panama Canal in 1923, for distribution in the Eastern market.—EDITOR'S NOTE.

DOUGLAS FIR is one of the principal lumber trees of the country and of the first commercial importance. It is particularly fortunate that Douglas Fir, which constitutes about one-fourth of the remaining timber supply in the United States should possess the qualities essential to so many and such a wide variety of uses.

As a building material it is most important being greater in strength and stiffness than any other wood of like weight. It is employed for dimension stock, joists, floor beams, rafters, flooring, siding and finish of all kinds in general construction as well as for girders, columns and thick flooring in Mill Construction. Its various uses run from furniture to silos, from air-plane stock to dock piling and from toys to fire department ladders.

Douglas Fir grows in massive stands in the mountainous region of the Pacific Northwest where in a comparatively small radius are many variations in altitude, exposure and soil conditions. No other important commercial tree in America grows under such diverse climatic conditions. The Douglas Fir tree is found on the hill sides and in the valleys, on north slopes as well as south slopes, in damp and in dry soil. Obviously these varying conditions affect the growth of the trees and are reflected in the character of the wood produced.

The Douglas Fir trees average from 6 to 8 feet in diameter, the immense trunks rising to heights of 200 to 250 feet, straight as a plumb line from tip to roots and without a limb for 60 feet to mar their trunks. In the denser stands the trees grow rapidly in height but slowly in diameter. Where the stands are more open giving more light the increase in diameter is correspondingly greater and the wider annual rings show more contrast between the soft spring wood and the dense material produced later in the season.



The camera is better qualified than the pen to describe the size and straightness of the Douglas Fir

The topography and nature of the country make logging a task for genius, while the nature of the Douglas Fir tree requires a careful selective process throughout the manufacturing operation. The producers' complications, however, are the users' gain. The reputable manufacturer recognizes the three distinct types of lumber obtainable and cuts and selects each type for the uses to which it is best adapted.

The three types of Douglas Fir lumber are based upon the rate of growth of the tree. (1) Rapid growth producing the coarse-grained wood, somewhat brashy in character. (2) Medium or normal growth containing a high percentage of summer wood, of maximum density and uniformly high in strength values. (3) Slow growth producing the fine grained wood, very soft in texture.

Some logs are composed almost entirely of normal or medium with only a relatively small amount of slow growth wood around the outside. In others all three types of wood are found, the coarse-grain in the center, the slow growth at the outside and between them the structural type.

[*Continued on page 22*]

[*Advertisement*]

A train load of large Douglas Fir logs on its way to the mill

Rapid growth logs and those portions of logs which contain rapid growth wood produce a type of dimension lumber that is straight-grained, light in comparison with its strength, and sufficiently strong for all ordinary framing purposes.

Slow growth Douglas Fir is highly suitable for inside and outside finish lumber, for doors, windows, mouldings, columns, gutters, cabinet work and many other uses where a moderate softness, ease of working, straight grain and durability are desirable qualities.

It is from this type of wood that the vertical grain Douglas Fir shop lumber is produced. The exceedingly small amount of sapwood together with the inherent decay resistance of the wood give it the durable qualities necessary for all exposed parts. It will not warp or twist. It takes and holds paint and enamel well and is free from any grain-raising tendency when exposed to the weather.

Douglas Fir shop lumber has been successfully used in the West for many years. Its introduction in the East has been more recent, principally because the Western factories consumed the entire output.

The popularity of this type of material has forced the manufacturer to cut more of it and it is now gaining favor rapidly the country over. There is every reason to believe that the use of vertical grain Fir shop will widen in the Eastern market as rapidly as has the use of Fir yard stock, timbers and plank.

Vertical grain Fir flooring for porches and Fir ceiling for porches and for finishing work in garages, cottages and similar buildings are just a few of the many other popular items cut from this same type of material.

Where striking grain effects are desired, Douglas Fir can be either rotary cut or sawed slash grain. It then reveals a beautiful figure that lends itself to a variety of interesting finishes.

Strength of the structural type of Douglas Fir as proved by test

It is from the Douglas Fir of medium or normal rate of growth and high density that the highest type of structural material is produced. Exhaustive tests at the Massachusetts Institute of Technology, the U. S. Forest Products Laboratory and Columbia University have proved conclusively that selected structural timbers of Douglas Fir have no superiors in strength values.

In considering test results, it should be remembered that the strength tests made some years ago by the U. S. Forest Service and privately owned testing laboratories on structural sizes of Douglas Fir were made before all the factors which are now considered of extreme importance were recognized.

Tests of the present day are based upon both physical qualities and defects. Moisture content, specific gravity, size and position of knots, angle of grain, amount of shake or checking, rate of growth and percentage of summerwood all have been found to influence strength values.

Recognition of the importance of all of these factors has made possible basic grading rules for structural quality which are dependable. Designers and constructors may now write their specifications definitely, and base their calculations for size on test values which have been checked repeatedly, within reasonable range of variation for a material which is not manufactured by formula.

Condensed results of the latest tests of full-size Douglas Fir beams show an average value of the modulus of rupture for structural grades to be about 7,000 pounds per square inch and an average value of the elastic limit to be about 4,400 pounds per square inch.

The values compare favorably with the averages obtained from 134 tests on green Douglas Fir stringers and 64 tests on air-seasoned Douglas Fir stringers, 8″ x 16″ in section, as reported in *U. S. Forest Service Bulletin 108*. A similar comparison in values of the modulus of elasticity in bending indicated that these range from about 1,600,000 pounds per square inch upwards in the structural grades.

Average ultimate values of horizontal shear in 72 tests on 8″ x 16″ Douglas Fir beams reported by the U. S. Forest Service vary from

1—Rapid Growth

2—Medium or Normal Growth

3—Slow Growth

PHOTOGRAPHIC CROSS SECTIONS OF THE THREE TYPES OF DOUGLAS FIR LUMBER

[*Advertisement*]

371 pounds per square inch in the common grades up to 471 pounds per square inch in the structural grades.

Bulletin 88, U. S. Forest Service, report results from 516 tests on 6″ x 6″ Douglas Fir compression specimens of varying commercial grades. The lower structural grades showed an ultimate crushing strength of about 3,100 pounds per square inch and an elastic limit value in compression of about 2,400 pounds per square inch. The higher grades showed an ultimate crushing strength of about 3,700 pounds per square inch and an elastic limit value in compression of about 2,850 pounds per square inch.

Careful study of the effect of all of the various factors which influence the strength of full-size specimens of timber now makes possible more economical design. Commercial grades of timber are now available, recognizing not only physical defects, but type and character of growth as well. Not only that: commercial grades have also been developed to cover specific uses in a structure. There are many pieces of timber, whose physical defects would prevent their use as stringers or beams which would, on the other hand, function perfectly as posts or compression members.

The development of specific-use grades is, therefore, a distinct advance in the scientific manufacture and merchandising of forest products.

The constructor profits by an intelligent selection of grades for the use intended.

Mill "B" of The Weyerhaeuser Timber Co., Everett, Washington. Looking across the log pond

How Weyerhaeuser Selection again makes practicable the Principle of Mill Construction

The Weyerhaeuser announcement of Douglas Fir timbers especially selected for industrial building came at a time when high overhead was one of the principal worries of industry. Concerns with building projects before them were seeking efficiency, flexibility and fire-safety at minimum cost.

The advantages of the mill construction principle for certain types of occupancy offered an obvious solution to the problems of many of these prospective builders, provided the quality of timber necessary could be made available. That is why architects, engineers and industrial builders welcomed the Weyerhaeuser announcement of selected timbers which again made the already established principle of mill construction practical and feasible.

This new Weyerhaeuser policy of scientific selection, as practiced today, begins in the forest, continues in the log pond, follows the log through the mill and ends only with the expert graders' final inspection of the finished timber.

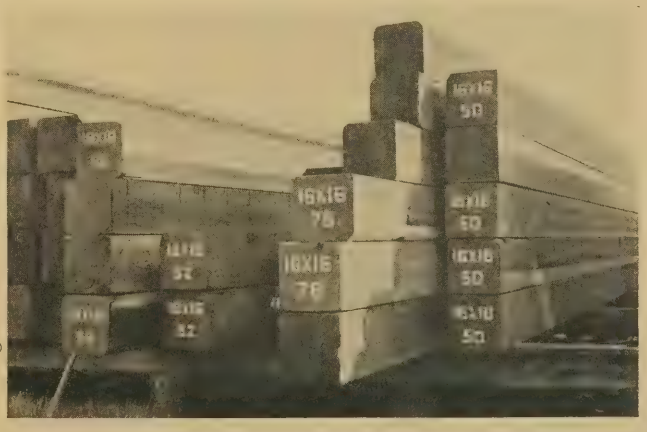
It takes into account all of the different factors which influence the service value of the product. It recognizes the fact that while the common grades of dimension and timbers produce material of sufficient strength for all ordinary construction purposes, there are, on the other hand, certain uses and certain types of construction which demand *greater uniformity* in strength values against which the architect and the engineer can figure with greater accuracy and a higher degree of certainty that *all* of the timbers in a given shipment will measure up to the desired requirements.

To limit and control the variation likely to occur in different pieces of timber of the same size and species requires scientific selection based upon years of research and an intimate knowledge of timber growth.

The extensive facilities of the Weyerhaeuser organization, its trained personnel and its sixty-five years of experience in handling forest products are your assurance that timbers and other items of construction lumber purchased of us will deliver what is expected of them.

On each Weyerhaeuser Douglas Fir timber you will find the Weyerhaeuser Forest Products trademark—your assurance of a standard article of known merit.

Squaring off a huge Douglas Fir log on the eleven-foot band mill at the Snoqualmie Falls Lumber Company



Douglas Fir timbers at Weyerhaeuser distributing yard at Baltimore. Timbers up to 30″ x 30″ and from 80 to 100 feet long are obtainable

Mill "A" of the Weyerhaeuser Timber Company at Everett, Washington
The boats in the background are taking on cargoes of lumber for the Atlantic Coast

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The Weyerhaeuser Timber Company has built a great distributing plant at Baltimore, Maryland. Here enormous stocks of structural timbers, plank, dimension and yard stock place the timber resources of the Pacific Coast at the eastern builders' doorstep.

Weyerhaeuser-owned vessels maintain a regular schedule between the mills at Everett, Washington and Baltimore, thus assuring a dependable source of supply year in and year out.

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The Baltimore distributing yard promises a twenty-four-hour service—and makes good its word.

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An alley of 3" plank at the Baltimore distributing yard of the Weyerhaeuser Timber Company

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Douglas Fir timbers at the Twin City Branch of the Weyerhaeuser Timber Company at Saint Paul

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WHITE PINE

SERIES OF

Architectural Monographs

Volume XI *Number* 5

COUNTRY MEETING HOUSES

along the

Massachusetts-New Hampshire Line

BY

Robert P. Bellows

AN

Architectural Monograph

COUNTRY MEETING HOUSES

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Being the FIFTH *Number of Volume XI and*
THE SIXTY-THIRD MONOGRAPH OF

THE WHITE PINE SERIES

Intimate treatiſes of the ARCHITECTURE of the *American Colonies* and of the *Early Republic* preſented with well ordered completeneſs, to further a broader underſtanding and to create a permanent Record of *Early American* ARCHITECTURE.

RUSSELL F. WHITEHEAD, Editor

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Meaſured Drawings from the GEORGE F. LINDSAY *Collection of* EARLY AMERICAN *Documents · The* WHOLE *impoſingly embelliſhed by Reproductions of Beautiful Photographs by* KENNETH CLARK

NEW YORK

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THE FIRST PARISH CHURCH, ASHBY, MASSACHUSETTS

Built in 1809

COUNTRY MEETING HOUSES

Along the Massachusetts-New Hampshire Line

By ROBERT P. BELLOWS

ALONG the middle part of the northern boundary of Massachusetts is a cluster of country meeting houses. They are situated in the south-west corner of New Hampshire and across the line in Massachusetts, in the townships of Ashby, Templeton, Fitzwilliam, Westmoreland, and Acworth Town (near S. Acworth, N. H.)

Built at the beginning of the last century these simple structures are remarkable for the richness and originality of their exterior detail and ornament. They show the wooden country meeting house of a hundred or more years ago at its best.

In many ways they are very similar. They all are set on high ground, fronting on village greens, with their backs to open meadow or woodland and, in two cases, a country graveyard. They can be seen from afar off and dominate, by bulk and height, each composition of town and landscape.

In size they vary from 50 to 58 feet in width, and between 60 and 68 feet in length. This does not include the porch or other motive on the front which in no case projects more than a few feet. At the rear they are square without projections. Each has a bell and an open belfry. Each is surmounted by a tower and an enormous weathervane. The more sophisticated carry the town clock.

Their builders placed them close to the ground with the land sloping away at the rear. Splendid big blocks of granite underpinning support the sills. Big granite slabs with generous treads rise gently in two or three steps to triple entrance doors.

The plans originally must have been much alike. At Templeton the congregation enters directly through a vestibule about 12 feet wide with stairs at each end leading to a gallery above and at each side. There is some evidence that the other churches were originally built in this fashion and that later they were floored over at the gallery level. This makes them now two-story buildings with offices and smaller rooms on the ground floor, though this is not apparent from the outside.

The windows are of the simple double-hung type with twenty-four lights, of the same character as house windows of the period. In proportion the openings are rectangles, in height about twice the width, which varies from 3 feet to 3 feet 6 inches. Three of the churches have eight windows on a side; the two shorter have six and five.

Templeton, built in 1811, is very, very like Fitzwilliam. The difference in length is a matter of inches; in width, some three feet. It is obvious that Fitzwilliam, built in 1817, was "taken almost straight" from Templeton.

Acworth Town also, built "about a hundred years ago," let us say in 1825, is almost identical with Fitzwilliam, except that it lacks the columnar porch and the clock and the steepled top. Thus did the fashions move up state. We have been able to compute from these three churches, their dates and distances, that in the early part of the nineteenth century, architectural styles travelled up country at the rate of about 2½ miles per year, a more conservative speed than at present.

In speaking severally of these old meeting houses, we like to refer to them *tout court* by the name of their towns alone. Thus architects are wont to speak reverentially of Chartres or Salisbury when they mean the great cathedrals in those delightful places. This use of "the container for the thing contained" is called Metonymy by the learned. These gave, in the old days, as an example, that short yet pregnant phrase, "He drank the bottle." The meaning, except for the year and vintage, is perfectly clear.

ASHBY; Going north from Boston, we come first to Ashby. It is fittingly the earliest, built in 1809, and is a fine simple building, not unlike many other churches in the more immediate neighborhood of Boston. But the beauty of the trim of its triple door, the agreeable scale of its main cornice and the charm of its belfry tower make it one of the most satisfying of its type. The clapboarded Palladian window at the rear bespeaks by its position, the building was originally one-story.

To reach the other churches, we pass over a small watershed and find the brooks now running with us to the westward. From that quarter must have come the new influences to be remarked in their architecture.

TEMPLETON, (good summer hotel), is but two years the junior of Ashby. But here we find new variations on the old tune. Hail to the Ionic order, seen through the eyes of a country carpenter, Elias Carter, of Brimfield.

The wide columnar porch, the prototype of Fitzwilliam and Westmoreland, strikes a new though naive note. The intercolumniation follows more closely the proportions of a mantel motive, let us say, than those of classic precedent. The lintel is almost as long as the pediment. We would not have it otherwise. After all the porch is very shallow and the order very handsomely executed. Each of the four columns is carried on a pedestal, man high.

The main cornice is much like Ashby. It runs around the whole church. On the front is added an architrave and frieze. At the corners, Ionic pilasters run to the ground outdistancing the free columns by some six feet. It may be that these free columns once went the whole distance, then rotted at their base, and pedestals were substituted for their lower parts. In the porch pediment we find an elliptical window with palm "supporters."

FITZWILLIAM, (excellent old village tavern), is but fifteen miles to the north-east over the state-line. Here we find the same order, cornices, balustrades, windows, doors and underpinning. The tower is almost identical. Painted elliptical "fake" windows at the top have been added and look surprisingly well. A pyramid at each corner of the main tower may well be of later date. The clock is placed somewhat lower, and there is a decorative panel beneath it. There is an engaging scoop in the soffit of the porch to enable a small Palladian window to make connections. The little elliptical window in the pediment has the crossed palm leaves. The building is now used entirely for town purposes.

The misfortunes, perseverance and final triumph of the townspeople in getting themselves a satisfactory church is well told in the Rev. Norton's Town History.

"In September of 1803, Thomas Stratton was paid three dollars and thirty cents for assisting to draft a plan for the meeting house.

"In 1816 a new and commodious meeting house was erected . . . . at an expense of about seven thousand dollars which was a large sum for the people to raise at that time for such a purpose. This church . . . . in every way a noble structure, like churches built about the same time in Athol, Templeton and Petersham."

(Note: Templeton alone exists to-day, in approximately its original form.)

"This church had been occupied for worship nine, or at most, ten Sabbaths, when during a thunder storm on the night of January 17, 1817, it was struck by lightning, fired and totally consumed. . . . . The loss to the people was great, but it served the good purpose of uniting them as they had not been united for many years. . . . . With slight changes in the foundations, the house now standing was erected. This church cost $6000." It was completed and dedicated "one year and twenty days," from the time of the catastrophe.

In this case, according to local traditions, the four big wooden columns were hewn into shape on the spot and hollowed out their entire length to avoid decay. Even then they were placed above the stone porch floor on strange granite blocks with chamfered corners.

WESTMORELAND, lies some twenty miles to the north-west. There are a few good old houses about a green, a charmingly placed old parsonage among them, no evident stores or post-office—just a little hamlet, half asleep.

Here we encounter the Tuscan Doric in all its New Hampshire glory. The white woodwork, the dark green blinds, the slate roof and the red cupola make a pleasant picture at the upper end of the sloping common. This church is the smallest, measuring but 50 by 60 feet. While the Ionic orders of Templeton and Fitzwilliam have a diameter of 2 feet, this Doric order is only 1 foot 6¾ inches. True to form, the shafts rest directly on raised granite blocks. The cornice is much simpler than the others.

The side windows on the top story must have been increased in size when the second floor was put in, all except the end ones at the top of the stairs. "False" blinds, which cover not only these small windows but also a large area of clapboard, are discreetly nailed shut for all time.

We sought information from pleasant people living at the foot of the green who, giving us the key, told us to be sure to climb the tower. This we did and beheld the silvery beauty of the Connecticut Valley. We mounted also the reading desk and there within the big Bible found what we wanted. In a delicate and clear script, "In September 1779 the first meeting was held in our present house of worship after its removal from the now called 'North Cemetery.' It cost to remove and fit up the building 2388 L. 11s. and 6d. . . . . The house remained in this form until 1824 when an addition of 20 feet was put on the front, porches removed (sic) and a steeple added. . . . . In 1853 it was remodelled into its present form."

This dates Westmoreland for our purpose as 1824.

CHURCH AT TEMPLETON, MASSACHUSETTS

Built in 1811 *by Elias Carter*

The frame is earlier and the devastating second floor must be the later "remodelling." But the fine belfry and front with their pleasing variations and simplifications were erected only seven years later than Fitzwilliam.

The cheerful manner in which this church was moved about is local legend. Destined for a site still farther from the "North Cemetery," it was held up *en route* by the astute tavern-keepers facing on the green who gave the movers a barrel of rum not to haul it further.

ACWORTH TOWN; If one has time it is well worth while stopping in Walpole to recuperate from such extensive globe trotting before motoring up to Acworth Town, a small settlement whose church is "as high as any in the state." It is a cross between Fitzwilliam and Ashby, but has arched triple doors. The tower, though much like its predecessors, is, to our thinking, the best of them all.

In these five meeting houses there is no note of the Greek revival; rather the swan song of the later Colonial classic, sung by obscure rivals of Asher Benjamin. It is written that the late Charles F. McKim on seeing some of these churches expressed an admiration of their architecture.

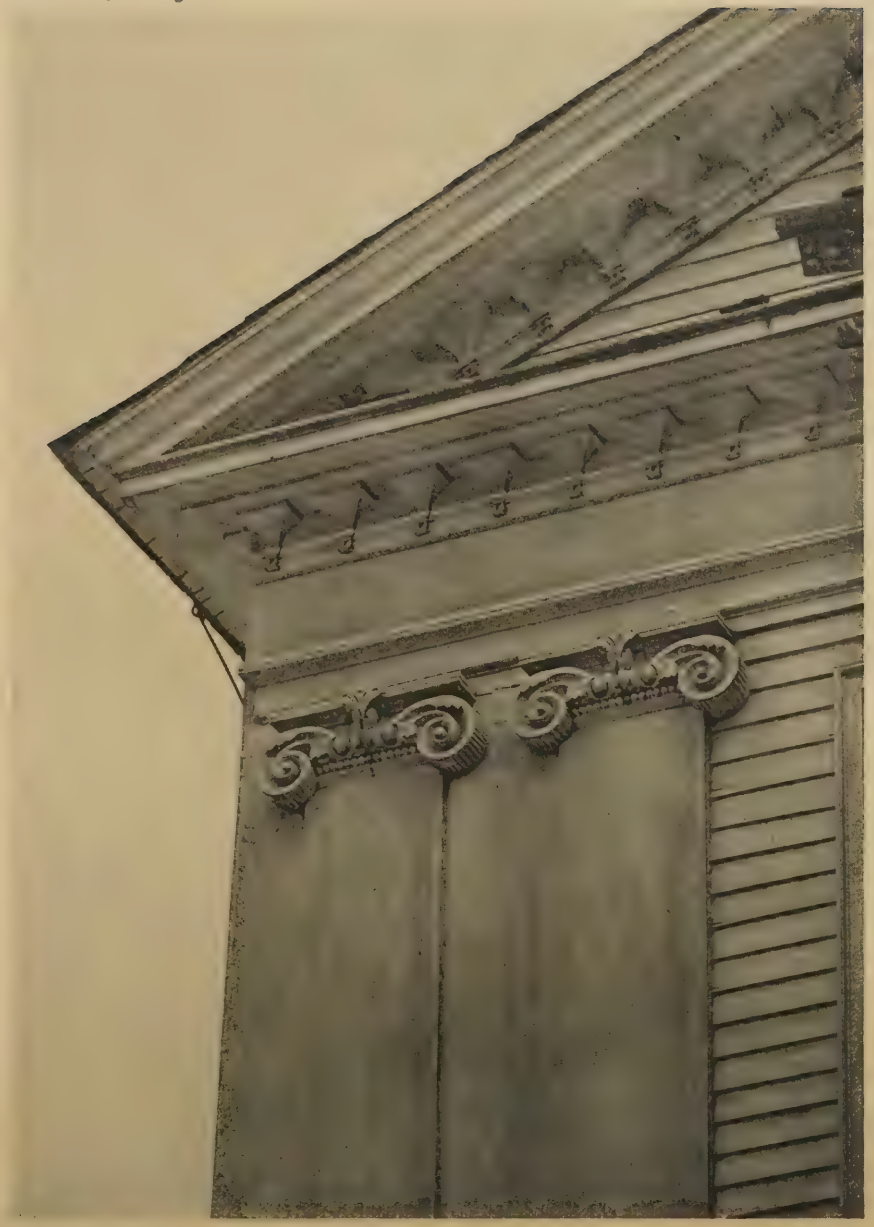
DETAIL OF ENTABLATURE—CHURCH AT TEMPLETON, MASSACHUSETTS

DETAIL OF SPIRE—CHURCH AT TEMPLETON, MASSACHUSETTS

DETAIL OF SPIRE—CHURCH AT FITZWILLIAM, NEW HAMPSHIRE

CHURCH AT FITZWILLIAM, NEW HAMPSHIRE

Built in 1817



MAIN CORNICE

DOORWAY CORNICE

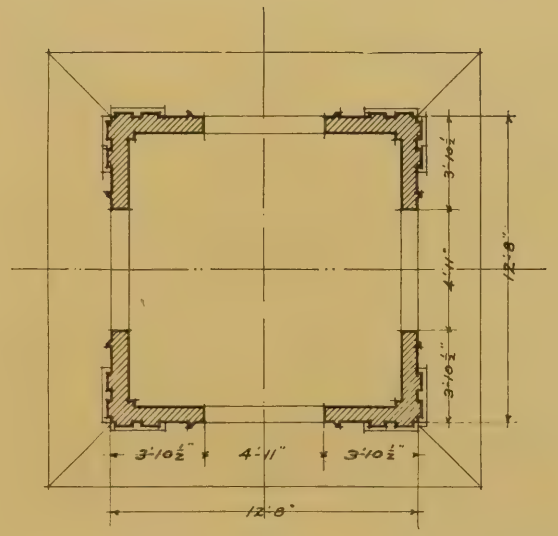
CHURCH AT FITZWILLIAM, NEW HAMPSHIRE

The WHITE PINE SERIES *of*
EARLY AMERICAN DOCUMENTS

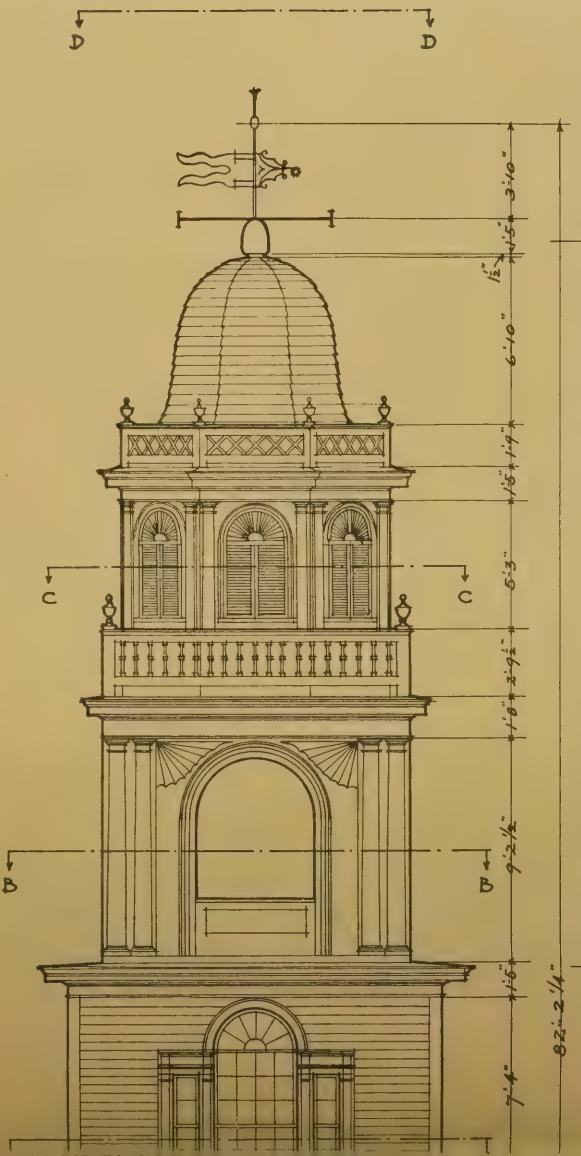
With MEASURED DRAWINGS *from*
The George F. Lindsay Collection

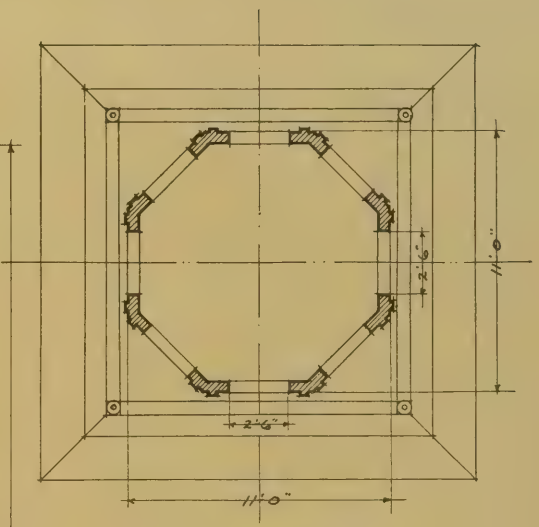
THE PARK HILL CHURCH
WESTMORELAND, NEW HAMPSHIRE

DETAIL OF SPIRE

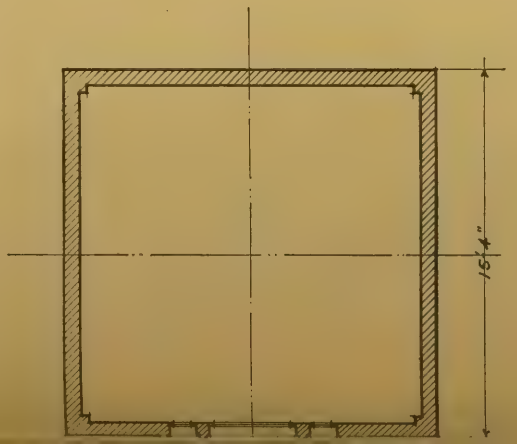


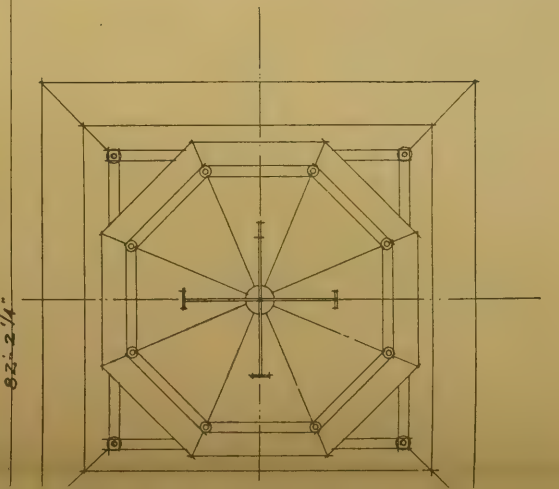
PLAN - "B-B"

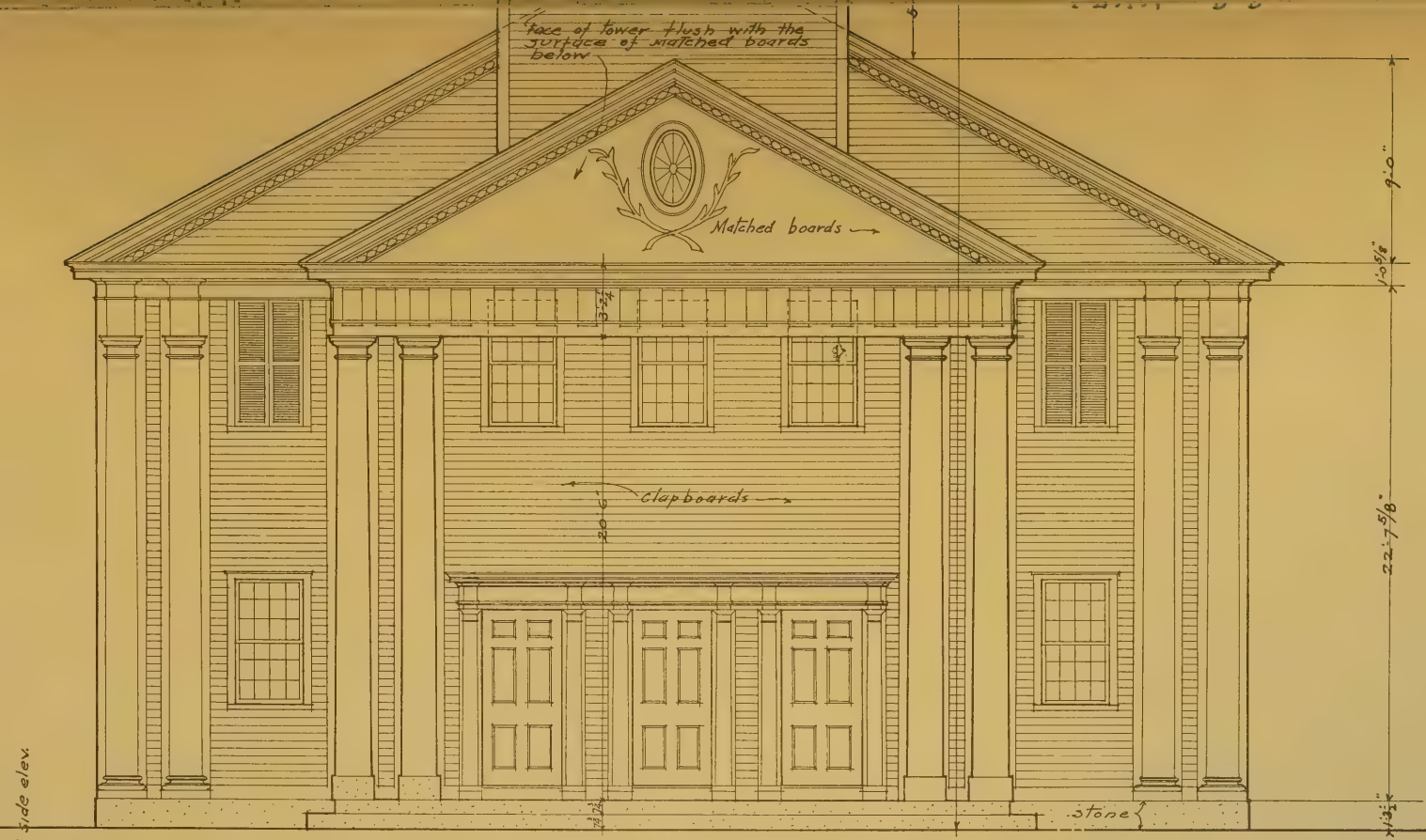




PLAN - "C-C"

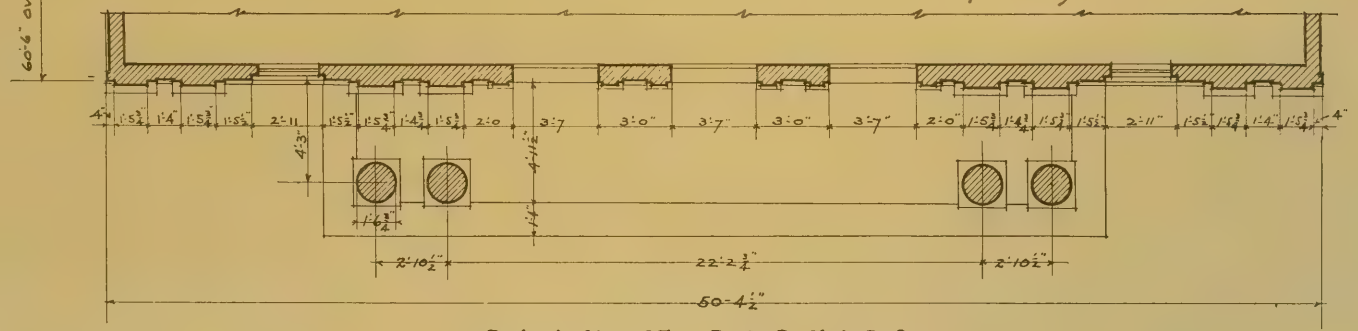






~FRONT ~ ELEVATION~

scale one inch = eight feet.



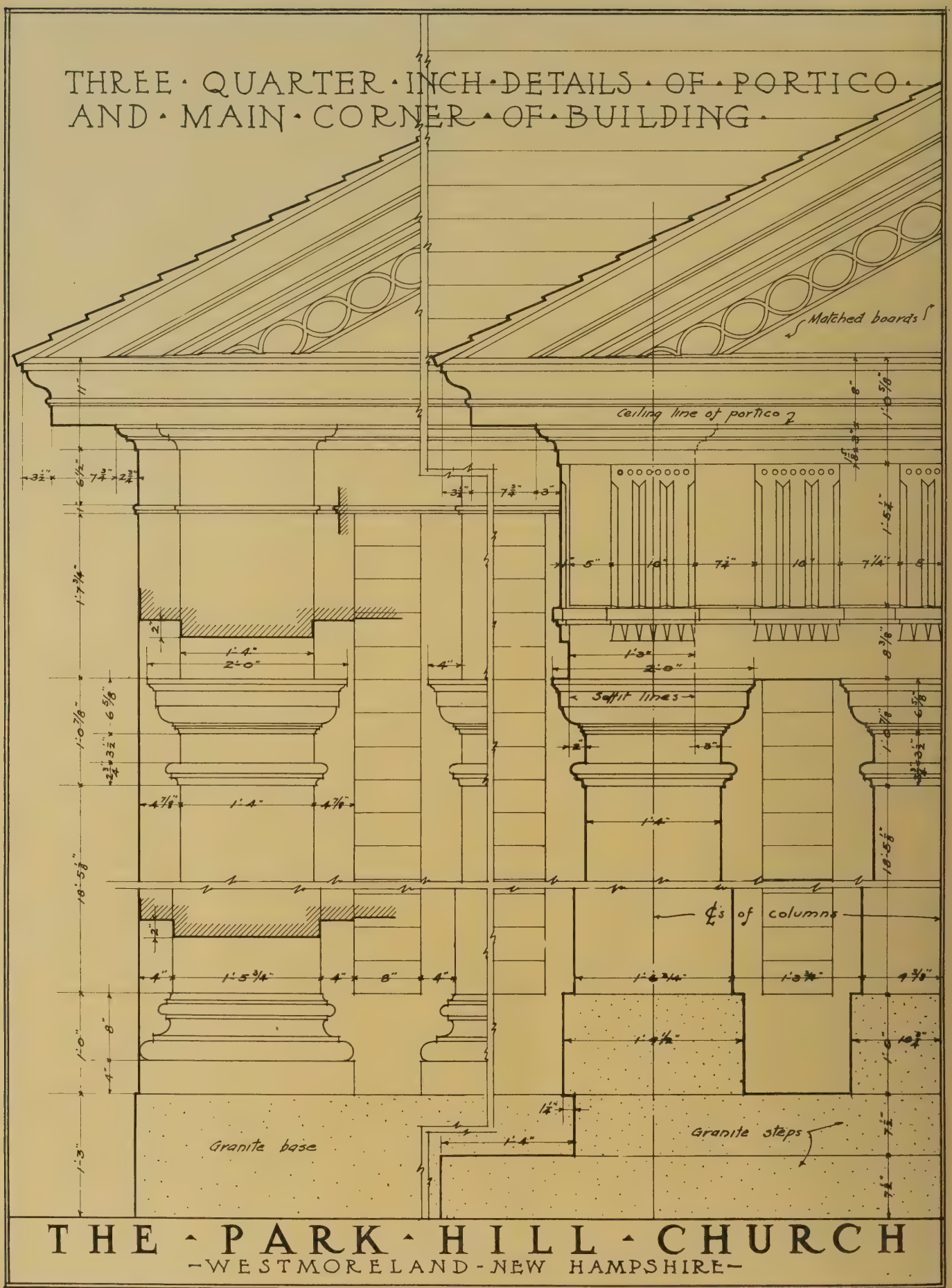
~PLAN OF PORTICO~

~Meas + Drawn by Kenneth Clark 1925~

~THE~PARK~HILL~CHURCH~

~WESTMORELAND ~ NEW HAMPSHIRE~

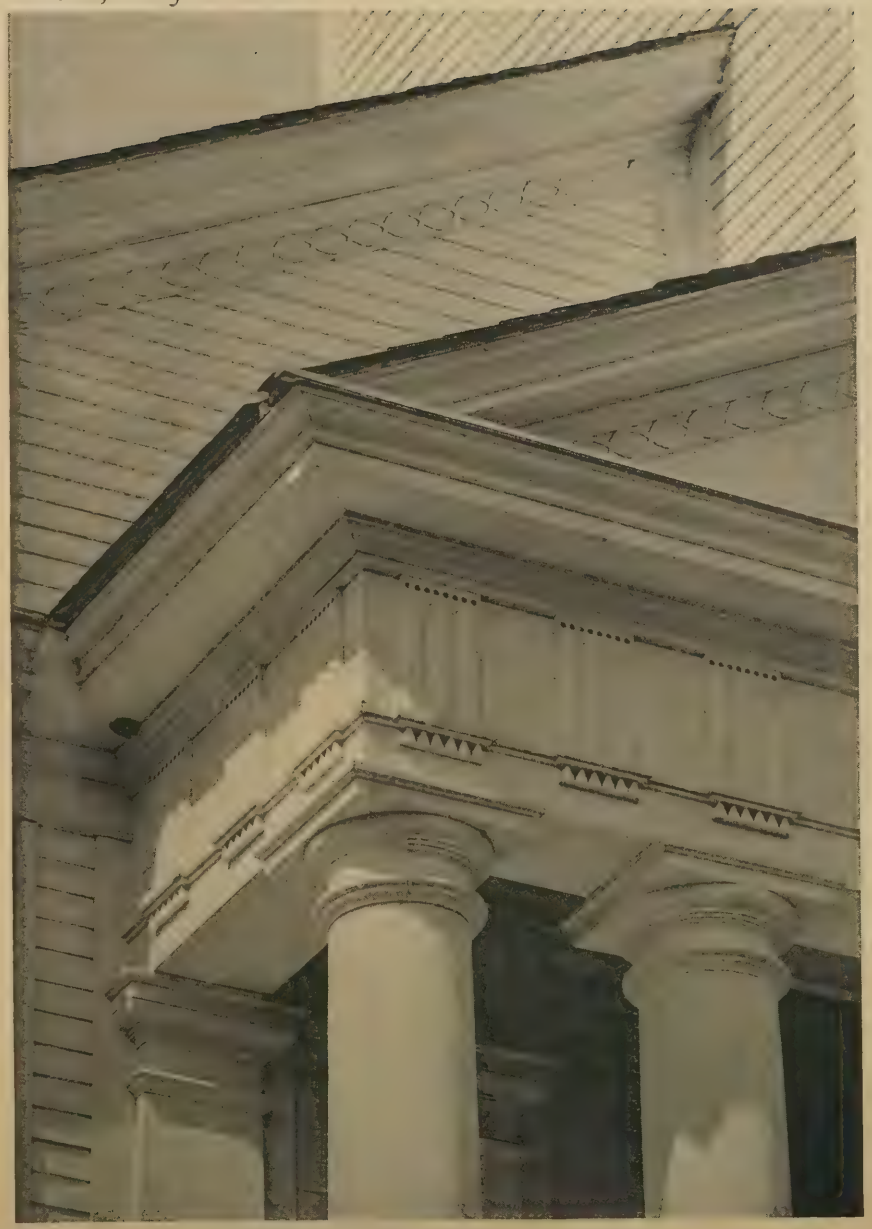
These Drawings are reproduced exactly at the scale marked under each part


THREE · QUARTER · INCH · DETAILS · OF · PORTICO · AND · MAIN · CORNER · OF · BUILDING ·
Matched boards
Ceiling line of portico
Soffit lines
℄s of columns
Granite base
Granite steps
THE · PARK · HILL · CHURCH
—WESTMORELAND - NEW HAMPSHIRE—

Drawing reproduced exactly at scale shown

THE PARK HILL CHURCH—WESTMORELAND, NEW HAMPSHIRE

Built in 1824



DETAIL OF PORTICO CORNICE

DOORWAY CORNICE

THE PARK HILL CHURCH, WESTMORELAND, NEW HAMPSHIRE

CHURCH AT ACWORTH TOWN, NEW HAMPSHIRE

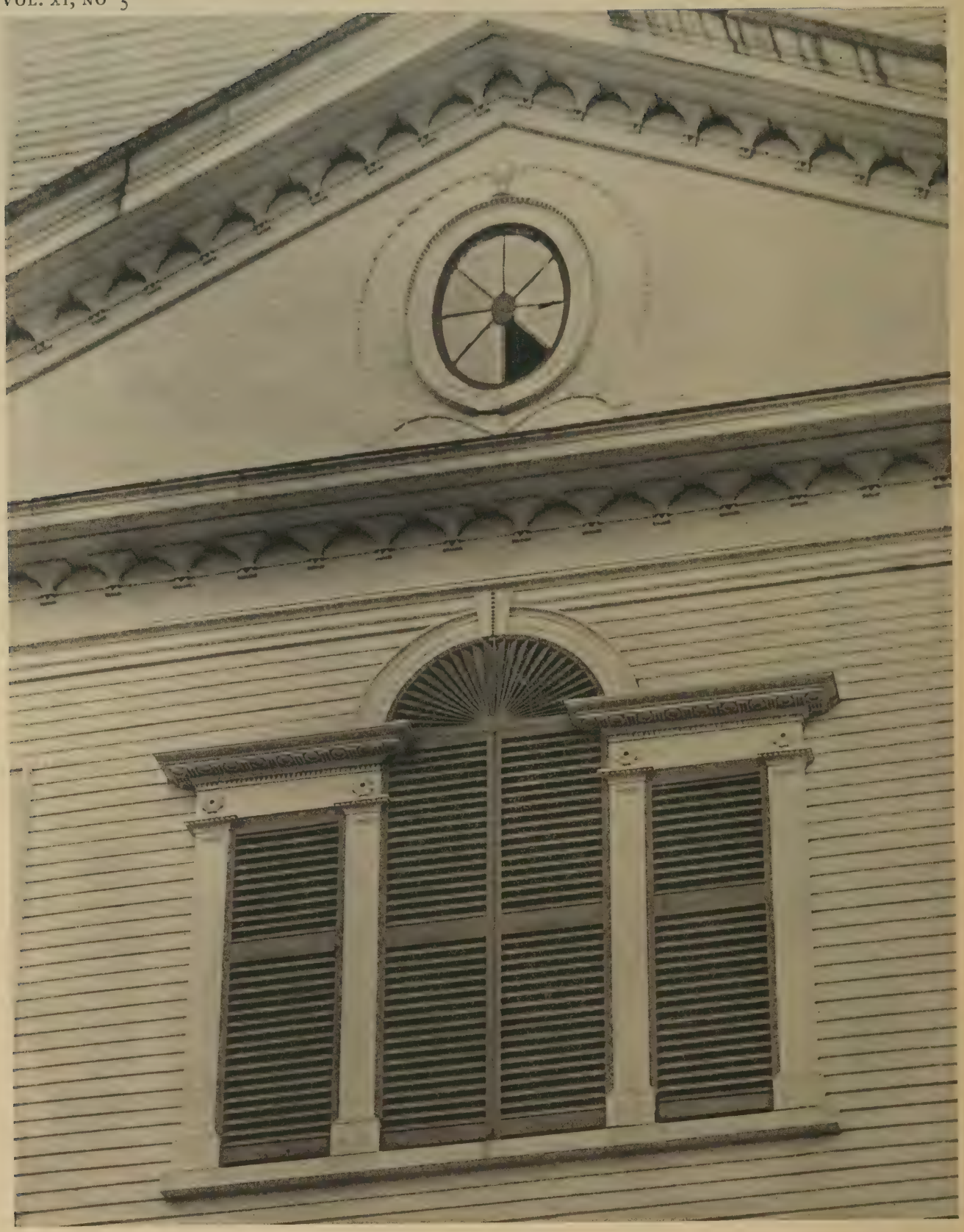
Built circa 1825

DETAIL OF ENTABLATURE

DOORWAY DETAIL

CHURCH AT ACWORTH TOWN, NEW HAMPSHIRE

DETAIL OF SPIRE—CHURCH AT ACWORTH TOWN, NEW HAMPSHIRE



DETAIL OF PEDIMENT—CHURCH AT ACWORTH TOWN, NEW HAMPSHIRE

The Economies and Advantages of Heat Insulation in the Modern House

NO ONE who compares present-day building with that of the past can fail to recognize the American public's constantly growing demand for better living conditions and greater comfort in their homes. We find it evidenced in the floor plan of a modern house and in the method and materials of its construction and furnishing. Floor plans are laid out to be compact, efficient, economical and livable; the materials for construction are selected with the basic idea of adding to the warmth and comfort of the house under all conditions; and such devices as thermostatic control, clothes chutes, and built-in cupboards are among the features that make the home complete.

Because of this demand for greater comfort, insulation against heat and cold has grown in popularity until today it is classified as one of the essentials to good construction. Forcing the furnace in order to maintain a temperature of 68° to 70° in zero weather, or waiting for the house to get cool enough to retire on hot sweltering nights, is out of tune with the trend of good building practice today.

There is no mystery involved in the theory of heat insulation. The laws which govern the flow of heat through any material are similar to the laws that govern the flow of electricity along the conductor or the flow of water in a pipe. To insulate a building a condition must simply be provided that will retard the passage of the heat waves. Thus, heat generated within is kept from passing outside in cold weather, and since it works both ways, in summer the outside heat cannot penetrate indoors. It was once thought that a wall which contained an air space between the outer and inner surface possessed sufficient insulating qualities. This idea has lately been exploded, however, by laboratory research and tests on actual buildings which have proven that in order to be of any value as a heat insulator, an air space must be so minute in size as to prevent molecular activity and hence prevent circulation. There is a direct ratio between the heat loss through the walls and roof of a building and the materials used in its construction, but in all standard types the loss is enormous unless some kind of insulation is used.

Wood has natural insulating properties due to its structural composition, for it is made up of many infinitesimal dead air cells. Thus, while wood is not a finished insulating product, a frame house is considerably easier to heat than a brick or stucco one.

Realizing the need for an efficient insulating material and with this fact in mind, the Weyerhaeuser Organization began experiments several years ago to determine a way of rearranging wood fibres to embody the greatest possible amount of "still" air. It was found that by a shredding process the fibres of wood could be manufactured into a light fluffy material, adding millions more of dead air spaces to those already contained in the fibres. This material has been perfected and is now manufactured under the trade name "Balsam-Wool," and has been used for the past four years with great success in thousands of houses throughout the country.

Insulation, to be worthy of use and to give efficient results, must fulfill many requirements:

(1) It must be a material which has a maximum resistance to the flow of heat—that is, must be composed chiefly of confined or "dead air"—and be at least a half-inch in thickness.

(2) It must be economical in cost and application to permit its use in the smaller houses as well as the expensive ones.

(3) It must be flexible enough to allow snug fitting into corners and around projections.

(4) It must be permanent and not disintegrate, settle or rot.

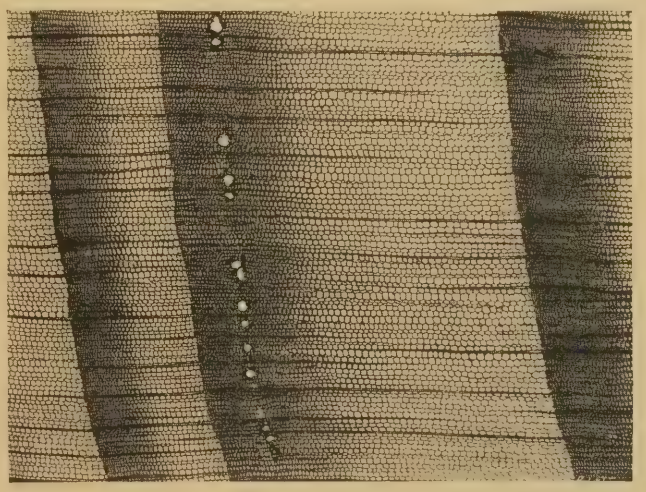
(5) It must be not only waterproof, but moisture proof as well, for moisture and dampness can penetrate where water cannot. Moisture in any insulating material immediately destroys the function of that material, as heat and cold the same as electricity penetrate dampness with little resistance.

(6) It must be fire resistant and not support combustion, thus eliminating the hazard of carrying fire within the walls.

(7) It must be sanitary, and rat, mouse and vermin proof. This is usually accomplished by chemical treatment.

(8) It must be non-odorous.

(9) It must be made in sizes which conform to standard building measurements so as to eliminate waste and unnecessary labor.



CROSS SECTION OF CONIFEROUS WOOD *showing* CELLULAR STRUCTURE
Each of these cells contains confined or "dead" air.

(10) It must be light in weight. The addition of a heavy insulating material necessitates extra structural members which increase the cost of the building.

All of these necessary features have been incorporated in the Weyerhaeuser product, Balsam-Wool. The inherent quality of the wood from which it is made as well as the process of manufacture, make it remarkably efficient. It is a flexible insulation, closely resembling sheep's wool in appearance, and composed of wood fibres matted between two sheets of tough, asphalt coated Kraft paper, which renders it moisture and wind proof. The chemical treatment in making it fire-resistant, also makes it distasteful to vermin. Balsam-Wool is manufactured in widths which are standard in building construction and requires a minimum amount of time and labor to apply. It weighs only 190 pounds per thousand square feet, and is surprisingly inexpensive.

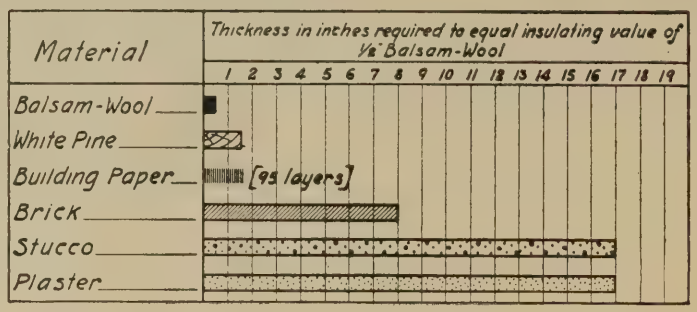

Material
Thickness in inches required to equal insulating value of ½" Balsam-Wool
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Balsam-Wool
White Pine
Building Paper
[95 layers]
Brick
Stucco
Plaster

CHART *showing the thickness of various building materials required to equal the insulating value of a ½ inch standard commercial insulation*

It has been thought for a long time that ordinary building paper possessed insulating qualities sufficient for house construction. The simple test of placing a piece of this paper between one's hand and a hot radiator or stove will easily disprove this theory. If this is followed up by taking an accepted insulating material for the same experiment, the difference in heat conductivity will be strikingly demonstrated. By laboratory tests it is found that one and a half inches, or ninety-five layers of building paper are required to equal a half-inch of efficient insulation. *(See chart above)*

In view of the fact that a large amount of heat is constantly being lost through the walls of all buildings, the C. F. Burgess Laboratories conducted a series of tests on *actual wall sections*. These tests determined the comparative heat transmission of various standard types of wall construction now in use and the amount of heat loss preventable in each case by the use of insulation.

From TABLE A below, it can be seen that 53% *more heat escapes* through an uninsulated standard *stucco* wall and 31% *more* through an uninsulated 8" *brick* wall than is lost through an uninsulated *frame* wall. Through the use of *good* insulation in the stucco wall the heat loss can be reduced from 53% greater heat loss to 45% less heat loss than occurs in the uninsulated frame wall. With the insulated brick wall heat loss is reduced to 41% of that which takes place in the uninsulated frame wall. The ineffectiveness of the insulating value of air spaces large enough to allow circulation is forcibly demonstrated in the case of the hollow tile wall which permits a 41% greater heat loss than does the solid brick wall of the same thickness.

Knowing as we do that heat rises, it is logical to assume also that the largest proportion of heat loss in a building is through the roof. It is a fact that 60% of the total heat manufactured in a house escapes in this way. A similar series of tests were made on *actual roof sections* to determine their comparative heat transmission and the preventable heat loss when an efficient insulating material was used. As in the wall tests it is shown that the heat transmission through the various types of roofs has a direct relation to the materials used.

A study of TABLE B shows that there is a greater heat loss through roof sections than wall sections. A 73% greater heat loss is found to exist through an asphalt shingle roof than

TABLE A.

TYPE OF WALL	B.T.U. transmission per sq. ft. per hr. per 1°F difference	RELATIVE HEAT LOSS	
		Compared with uninsulated frame wall %	Compared with uninsulated wall of same construction %
Frame, uninsulated	.267	100.0	100.0
" insulated*	.179	67.1	67.1
Stucco, uninsulated	.410	153.4	100.0
" insulated*	.227	85.0	55.3
8" Brick, uninsulated	.351	131.4	100.0
8" " insulated*	.207	77.5	59.0
4" Brick Veneer, uninsulated	.235	88.0	100.0
4" Brick Veneer, insulated*	.161	60.1	68.4
8" Tile, uninsulated	.495	185.0	100.0
8" " insulated*	.250	93.5	50.5

*The insulating material used in these tests was half-inch Balsam-Wool.

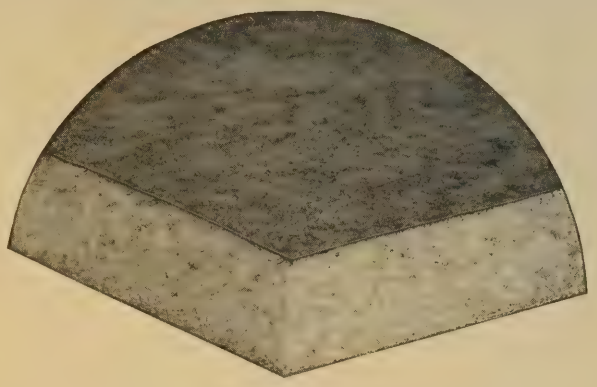
TABLE B.

TYPE OF SHINGLE ROOF	B.T.U. transmission per sq. ft. per hr. per 1°F difference	RELATIVE HEAT LOSS	
		Compared with uninsulated roof of Wood Shingle %	Compared with uninsulated roof of same construction %
Wood, uninsulated	.304	100.0	100.0
" insulated*	.190	62.5	62.5
Asphalt, uninsulated	.526	173.0	100.0
" insulated*	.258	84.9	48.1
Slate, uninsulated	.422	138.8	100.0
" insulated*	.231	75.9	54.7
Zinc, uninsulated	.482	158.5	100.0
" insulated*	.248	81.5	51.4
Tile, uninsulated	.515	174.0	100.0
" insulated*	.256	84.1	49.2
Copper, uninsulated	.564	185.4	100.0
" insulated*	.267	87.8	47.3

*The insulating material used in these tests was half-inch Balsam-Wool.

through a wood shingle roof, and this same asphalt shingle roof can be reduced 51% in heat transmission when lined with an efficient insulating material.

The foregoing tests prove conclusively the tremendous amount of heat lost through uninsulated walls and roofs of buildings. Insulation is within the means of the builder of every house. Any home that is worth living in, is worth the small added expenditure necessary to line it thoroughly with insulation in the walls and roof, this amount being less than 2% of the entire cost of the building.



FULL-SIZE SECTION OF BALSAM-WOOL INSULATION
Showing wood fibres re-arranged into a fleecy substance, matted together in blanket form, packed, without stitching, between two coverings of tough kraft paper lined with waterproof films of asphalt coating. Balsam-Wool contains 95% "still" air.

It is practically impossible to insulate the walls of a house already built, without considerable expense. It is an easy matter, however, to apply, either on the inside face of the roof rafters, or between them, an insulating material which will conserve more than half the escaping heat in any house already built.

An insulated house is so snugly sealed up that many heating engineers authorize a 20% reduction in radiation. This means a substantial saving at the start, and one which in some cases pays the entire cost of an efficient insulating material. The one-third to one-quarter less fuel required to heat the insulated house over the one which is merely a shell to keep out rain and snow, is such a substantial saving as to pay again for the insulation within a period of two or three years. Surely no other material which goes into a house can show such large earnings.

With a properly designed heating plant, the insulated house adds another luxury for the home-owner, as furnace tending is only necessary in the morning and evening. If furnaces were not obliged to compete in cold weather with the losses of heat due to uninsulated walls, there would be no necessity for constant attention.

When we realize that hundreds of thousands of people in uninsulated houses in this country are burning a quarter to a third more fuel in heating their houses, than those living in insulated houses of the same size and construction, it would appear that fuel is as cheap as air, and that the supply is inexhaustible. Fuel is the largest single item of expenditure in the operation of the ordinary home.

There is also the question of maintaining an even temperature throughout the house at all seasons of the year. This service of heat insulation is important from the standpoint of health as well as of comfort. Uninsulated houses are bound to be damp on rainy days, and draughty on windy ones, varying in temperature from room to room and hour to hour, as unsettled as the weather.

Insulation that renders service in winter, continues the good work in summer by keeping the heat of the outdoors from penetrating inside. Even attic rooms that are unlivable under usual conditions are rendered comfortable sleeping quarters by the use of insulation. A house without insulation takes hours to cool off at night. How much better to have a house that won't let the heat in, in the first place, rooms where the housewife can work without becoming exhausted from the high temperature, and where the bedrooms are cool and restful to sleep in whenever the family want to retire. We are most careful to see that our food is kept away from the damaging heat of summer; by applying the same principle to our homes as our iceboxes, it is now possible to secure the same luxury for ourselves.

APPLYING BALSAM-WOOL INSULATION BETWEEN STUDDING
The flange formed on the ends and sides is held tight against the studs by means of lath or nailing strips.

An investment in comfort and health, by the use of insulation, is a sound one, but the dividends it pays in better and more healthful living conditions, which make the individual's home life happier, can not be estimated. We can estimate, however, dividends in money saved on fuel and radiation. Since these dividends are often as high as 25% to 30% annually, insulation can be regarded from a strictly business standpoint as an exceptionally good investment.

Standard Specifications for the Application of BALSAM-WOOL *for Heat Insulation*

Material:

Heat insulation shall be standard ½" thick Balsam-Wool, manufactured by the Wood Conversion Company, Cloquet, Minnesota. Widths shall be as specified hereinafter. (Note: Stock widths 17", 25", 32".)

General:

Continuity of insulation shall be maintained. Where floors, ceilings or roofs are insulated, as well as outside walls, insulate walls thoroughly between joist and rafter ends.

Throughout, all joints shall be made air-tight, especially at door and window openings.

Use full-length strips of insulation. End joints, where necessary, shall be butted and covered with lath, nailed through insulation to boarding or header.

Insulation strips shall in all cases run in the same direction as studding, joists and rafters.

Frame Outside Wall Insulation:

(Wood siding, stucco, brick veneer finish, studs 16" O.C.)

Method No. 1 (17" width) Insulate with 17" width Balsam-Wool applied vertically between studding with back of insulation against inside face of sheathing. The flanges or turnouts shall be continuously fastened by means of laths or strips nailed securely through insulation to the studding on the sides and to soles, plates or headers at the top and bottom.

(Note: Where studding is 24" O. C. use 25" width Balsam-Wool.)

Method No. 2 (32" width) Insulate with 32" width Balsam-Wool applied vertically on inside face of studding, edges butted together on every other stud. Fur over insulation with 1" x 2" furring strips on each stud to receive lath and plaster.

(Note: This method requires special width door and window frames.)

Where heating or plumbing pipes are installed in space between studs of outside walls, insulate between studs as in Method No. 1, in addition to insulation as above.

Masonry Outside Wall Insulation:

(Stone, Brick, Hollow Tile, Concrete Block.)

Method No. 1 (32" width) Fur the wall with 1" x 2" furring strips, 16" O. C., shimmed plumb and true. Insulate with 32" width Balsam-Wool applied vertically on inside face of furring, edges butted together on every other strip. Fur over insulation with 1" x 2" furring strips on each wall-furring strip to receive lath and plaster.

Method No. 2 (17" width) Fur the wall with 2" x 2" furring strips, 16" O. C., shimmed plumb and true. Insulate with 17" width Balsam-Wool applied vertically between furring strips with back of insulation against inside face of wall. The flanges or turnouts shall be continuously fastened by means of laths or strips nailed securely to the furring on the sides and to soles, plates or headers at the top and bottom.

Roof Insulation:

(Rafters 16" O. C.)

Method No. 1 (17" width) Insulate with 17" width Balsam-Wool applied between the rafters with back of insulation against inside face of roof boarding. The flanges or turnouts shall be continuously fastened by means of laths or strips nailed securely through insulation to the sides of rafters, plates, ridges, etc.

(Note: Where rafters are 24" O. C. use 25" width Balsam-Wool.)

Method No. 2 (32" width) Insulate with 32" width Balsam-Wool applied on the inside face of rafters, edges butted together on every other rafter. Fur over insulation with 1" x 2" furring strips on each rafter to receive lath and plaster. (Use laths or strips if space under rafters is unplastered.)

Ceiling Insulation:

(Joists 16" O. C.)

(Use instead of Roof Insulation for second floor ceilings where attic above is not to be used for living quarters; also for basement ceilings where space below is unheated; and for porch ceiling where space above is used for living quarters as in second floor extensions, etc. Insulation is also recommended for first floor ceilings under bedrooms that will be cold at night and for ceilings of first floor bedrooms where space above is heated at night.

Method No. 1 (17" width) Insulate with 17" width Balsam-Wool applied between joists with back of insulation against under side of rough flooring. The flanges or turnouts shall be continuously fastened by means of laths or strips nailed securely through insulation to the sides of joists, plates, headers, etc.

(Note: Where joists are 24" O. C. use 25" width Balsam-Wool.)

Method No. 2 (32" width) Insulate with 32" width Balsam-Wool applied on the bottom of joists, edges butted together on every other joist. Fur over insulation with 1" x 2" furring strips on each joist to receive lath and plaster or ceiling.

Floor Insulation:

(Over partially excavated or cold basement areas.)

(Joists 16" O.C.)

Method No. 1 (32" width) Insulate with 32" width Balsam-Wool applied over sub-floor, edges butted together over every other joist. Fur over insulation with 1" x 2" furring strips secured over each joist to receive finish floor.

(Note: Where entire building floor area is not insulated as above, set floor joists of insulated area sufficiently below normal joist level to compensate for thickness of insulation and stripping.)

Method No. 2 (17" width) (Note: Use where head room below joists is sufficient for working space and is accessible.)

Insulate with 17" width Balsam-Wool applied between joists as specified in Method No. 1 for Ceiling Insulation.

BALSAM-WOOL is made in three Standard Widths—17", 25" and 32". Standard Thickness ½"

Every roll of Balsam-Wool bears the WEYERHAEUSER FOREST PRODUCTS *trade-mark, the maker's pledge of personal responsibility.*

NOTE: Complete detailed information for the Drafting-room and Specification writer concerning Balsam-Wool for Heat and Sound Insulation is given in TECHNICAL SHEETS NOS. 1, 2 and 3 contained in the Wood Conversion Company Folder—A. I. A. File No. 37b.

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Architectural Monographs

Volume XI *Number* 6

THE GEORGE READ, II HOUSE AT NEW CASTLE DELAWARE

BY

By Herbert C. Wise

AN

Architectural Monograph

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By Herbert C. Wise

Being the SIXTH *Number of Volume XI and*
THE SIXTY-FOURTH MONOGRAPH OF

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DETAIL OF FRONT—THE GEORGE READ, II HOUSE, NEW CASTLE, DELAWARE

The George Read, II House at New Castle, Delaware

By Herbert C. Wise

WHEN the Swedish ships under the command of Peter Minuit anchored in the Delaware in 1638 their company of families bought from the Indians tracts which included the present sites of Wilmington and New Castle, and New Sweden was founded. The soil was fertile, game was abundant, and the settlement prospered. Even the arrival of Peter Stuyvesant in 1651 to claim the territory for the Dutch,—erecting Fort Casimir by way of emphasis,—and his naming the village New Amstel failed to shake the fortunes of the Swedes, for their individual holdings of land were not disturbed and they were allowed to continue their peaceful pursuits.

New Amstel was described as "a goodly town of about one hundred houses and containing a magazine, a guard house, a bake house and forge and residences for the clergymen and other officers." The settlement again fell into the hands of the Swedes and was again recovered by the Dutch; but upon Penn's arrival in 1682, he claimed the territory as a part of his Pennsylvania grant from the Duke of York, and thus terminated for all time the Swedish and Dutch authority upon the Delaware shores.

The town hall, the remains of the public market and, of course, the church and the court house can still be seen, as well as a number of delightful old residences. Of these may be mentioned the "Amstel" House, the Kensey Johns House, the Van Dyke House, the Church (or Thomas) House, but the largest and finest residence of the town is the Read House, pictures of which are to be found on these pages.

The house was commenced by George Read, II, in 1791 and completed in 1801. The mansion of his father, the first George Read, who was a signer of the Declaration of Independence, stood to the south (or left) of the present Read House in what is now the garden, and fronted on "The Strand," as the street nearest the River is called. This house was destroyed by what the townsfolk call "The Great Fire" that swept New Castle in 1824 and destroyed some of the finest buildings.

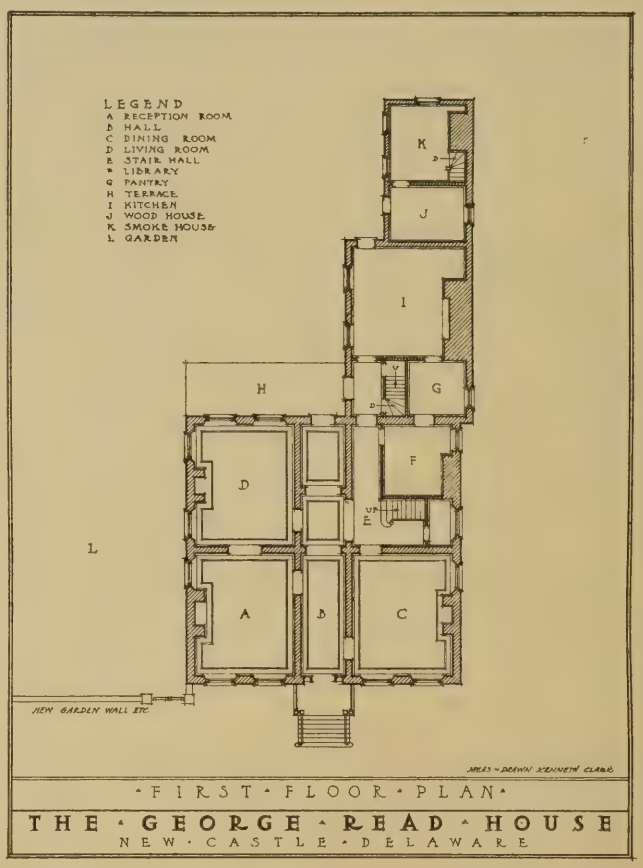
The present mansion, erected by the son, occupies the northeast corner of a plot of ground having a frontage of about 180 feet on The Strand. The depth of the property is about 312 feet and extends to The Green. The walls are of brick, and it would be natural to suppose these were made at the southern end of the town long known as "Brickmaker's Point,"—where roofing tiles were also made,—if indeed the family records did not prove that they had been bought of Jeremiah Hornkett, brickmaker of Philadelphia, and transported down the river by shallop at the rate of one dollar per thousand. The bricks are of a uniform rich dark red like the traditional Philadelphia "stretchers." They measure 8½ x 2 x 4¼ inches which approaches the standard brick of this country rather than the shorter and higher bricks imported from England. Thomas Spikeman of Wilmington laid the bricks. James Traquair of Philadelphia was the stonecutter. The lumber was also bought in Philadelphia, and Peter Crowding of that city was the contractor for the carpenter work.

A plot of well kept lawn stretches before the house and gives a broad outlook on the River. This space also gives a satisfactory view of the stately facade, distinguished as it is by the simplicity of parts characteristic of the English Georgian style, the finely wrought wood detail of the entrance, the Palladian window and the main cornice, the dormers of a form that rings traditionally true, and above all the balustrade enclosing a "Captain's Walk." Examining the facade in detail, it is found to be 49 feet 2 inches in width. Granite steps and platform lead to the front entrance with its doorway 4 feet 5 inches wide. Together with side lights and fluted pilasters of wood, the entrance measures 9 feet wide over all. An unusual device is to be seen in the divisions between the door and the side-lights. These are brought out to the face of the wall, thus recessing the door, as well as the side-lights, within deep panelled jambs and head of wood. The first story windows are 4 feet 3 inches wide; and as the bricks are so laid that five courses occupy 12¾ inches in height, the number of courses forming the jambs of the windows can be counted and the height of 8 feet 3½ inches ascertained. The marble window heads are really lintels with joint lines incised upon them to give the semblance of vous-

soirs. The ironwork appears to be of later date than that of the house itself.

The depth of the main or front body of the house is 46 feet 8 inches. A hallway 8 or 9 feet wide traverses the center of the house from the front entrance to the rear doorway opening upon the garden. The parlour and library divide equally the space upon the left of the hall. That upon the right is occupied by a square stair hall at the center, in front of which is the dining room and behind is the breakfast room. Beyond the last named and extending 50 feet or so further to the rear is the kitchen and service wing.

The interior doorways are provided with pilasters and entablatures in carved wood. With apologies to the editor of a journal once devoted to white pine, we remark that the doors themselves are of mahogany. Their surrounding detail is of pine, however, and bears many coats of white paint. The design is derived from classic forms but here used with a freedom leading to an effect a modern architect might yearn in vain to realize, daring not to depart from his books. Should he do so his innovations would be adjudged unpardonable. Yet similar crudities are present here and criticism is stilled. The reason? Time has consecrated them. Then, too, the touch of the hand everywhere noticeable on these mouldings of long ago has laid upon them a pliancy and softness which dwell not in the products of modern planing mills and machinery.



In the frieze and centerpiece of a mantel "French putty" ornaments are found depicting a gentleman-at-arms being driven in a lion chariot, preceded by a flying messenger and followed by his armed retainers. Architraves, skirting and chair rails have generous proportions and heavy projections. The ornament and decoration of the woodwork continue through the first floor. In the library it is as elaborate as in the parlour. The dining room is simpler, with a mantel from which all the moulding decoration is omitted; but the stairway and the second story hall are similar in treatment to the elaborate rooms of the first floor, yet they are quite distinct in detail. On the second floor, too, is the drawing room which is quite the most elaborate room of all and again displays distinct differences of detail. A fine ornamental frieze in moulded plaster is an added touch of decoration which distinguishes this room.

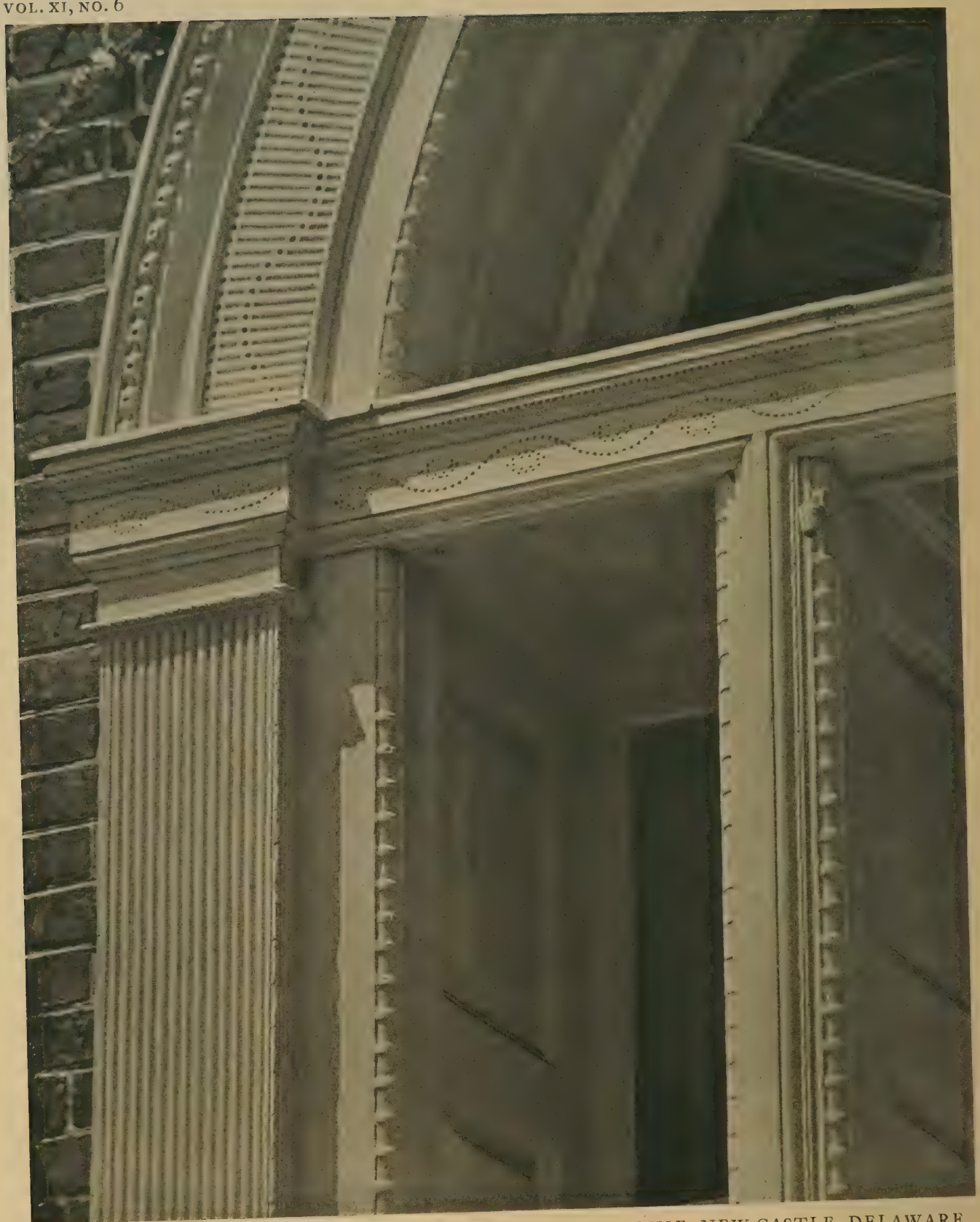
The hardware throughout the main part of the house is quite original, the escutcheons being formed of interlaced silver strands half round in section. In one of the second floor bedrooms there is a quaint arrangement of wires running through pulleys permitting the brass bolt of the door to be opened by a person lying in bed.

Upon entering the house, if the weather be warm, one sees the garden beyond through a doorway elaborated with pilasters and semi-circular transom with fan light, and over all a horizontal cornice. Here is a brick-paved space under a grape arbor, and beyond them are greenhouse, potting house and tool house.

The garden was laid out in 1846 by Robert Buist. Its front portion, extending about 130 feet along The Strand and equaling the depth of the house, is laid out in three geometric parterres. Beyond this is the portion laid out in serpentine paths between cedar trees, box bushes, balsam firs and a great maple. Further on is the kitchen garden where at two corners stand English walnut trees. An aged Balm of Gilead, a magnolia macrophylla and a crepe myrtle are treasured landmarks.

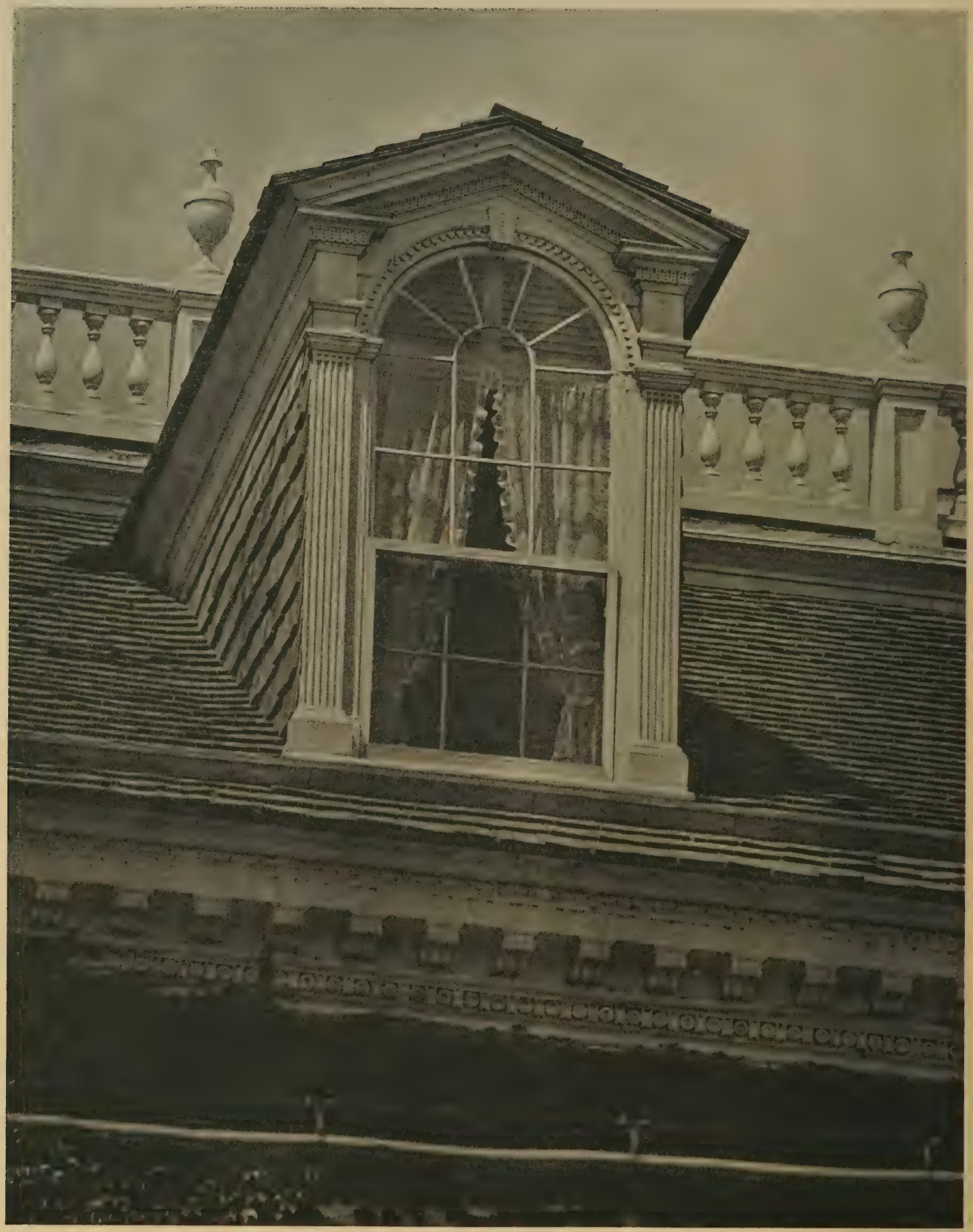
In 1845 the property was bought by the Couper Family, of which a descendent, Miss Hettie Smith, was long the owner and occupant. Fortunately, the present owner, Mr. Philip Laird, is not only sensible of the architectural treasure in his keeping, but delights in its possession. Upon acquiring it he had it restored as far as possible to its original condition. This work was done under the intelligent and sympathetic direction of Brown and Whiteside, Architects of Wilmington, who also added the brick wall surrounding the garden and the gateway.

THE GEORGE READ, II HOUSE, NEW CASTLE, DELAWARE



DETAIL OF FRONT DOORWAY—THE GEORGE READ, II HOUSE, NEW CASTLE, DELAWARE

DETAIL OF PALLADIAN WINDOW—THE GEORGE READ, II HOUSE, NEW CASTLE, DELAWARE



DETAIL OF DORMER—THE GEORGE READ, II HOUSE, NEW CASTLE, DELAWARE

HALL—THE GEORGE READ, II HOUSE, NEW CASTLE, DELAWARE

DETAIL, HALL—THE GEORGE READ, II HOUSE, NEW CASTLE, DELAWARE

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Reception Room of
THE GEORGE READ, II HOUSE
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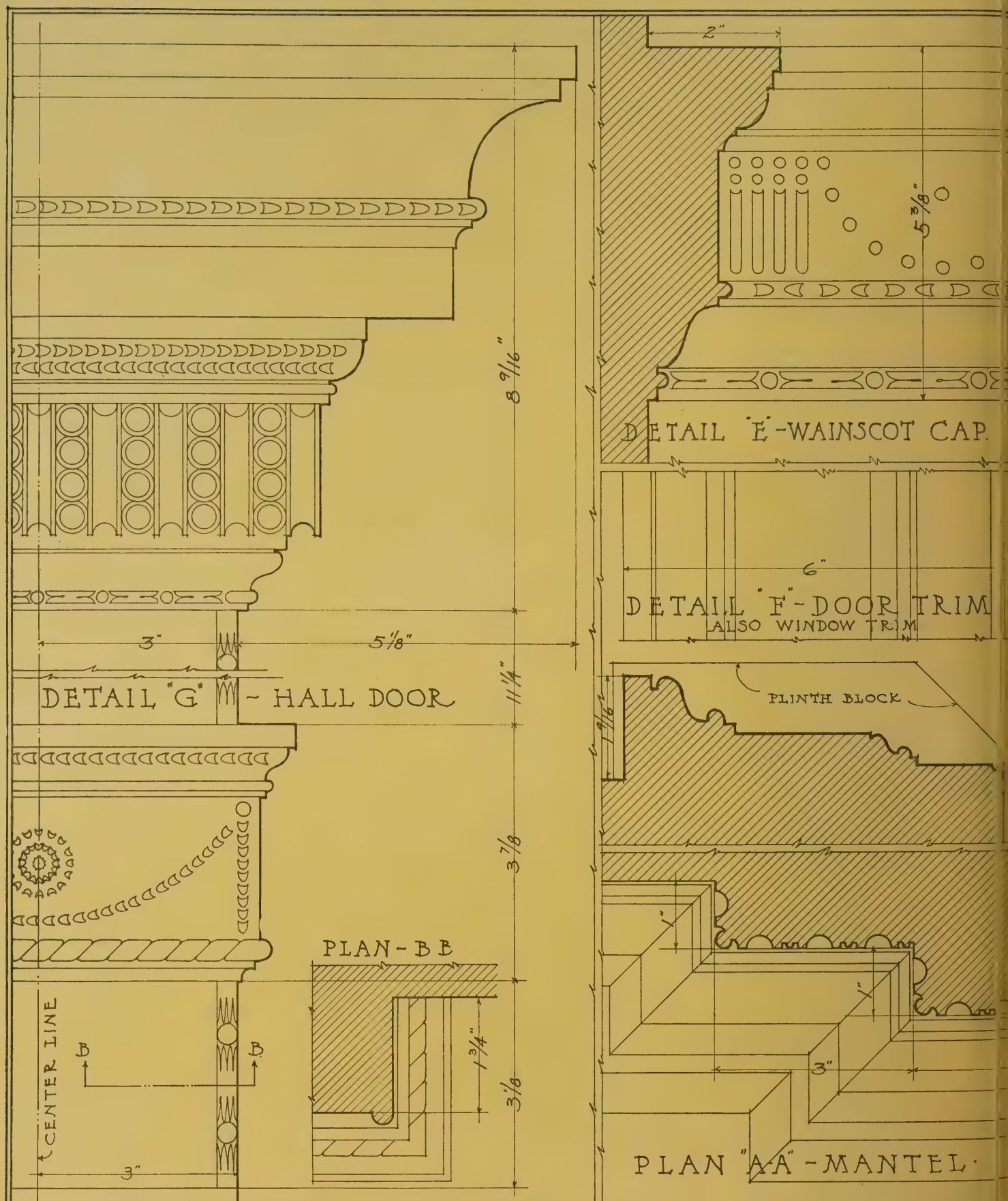
MANTEL IN RECEPTION ROOM



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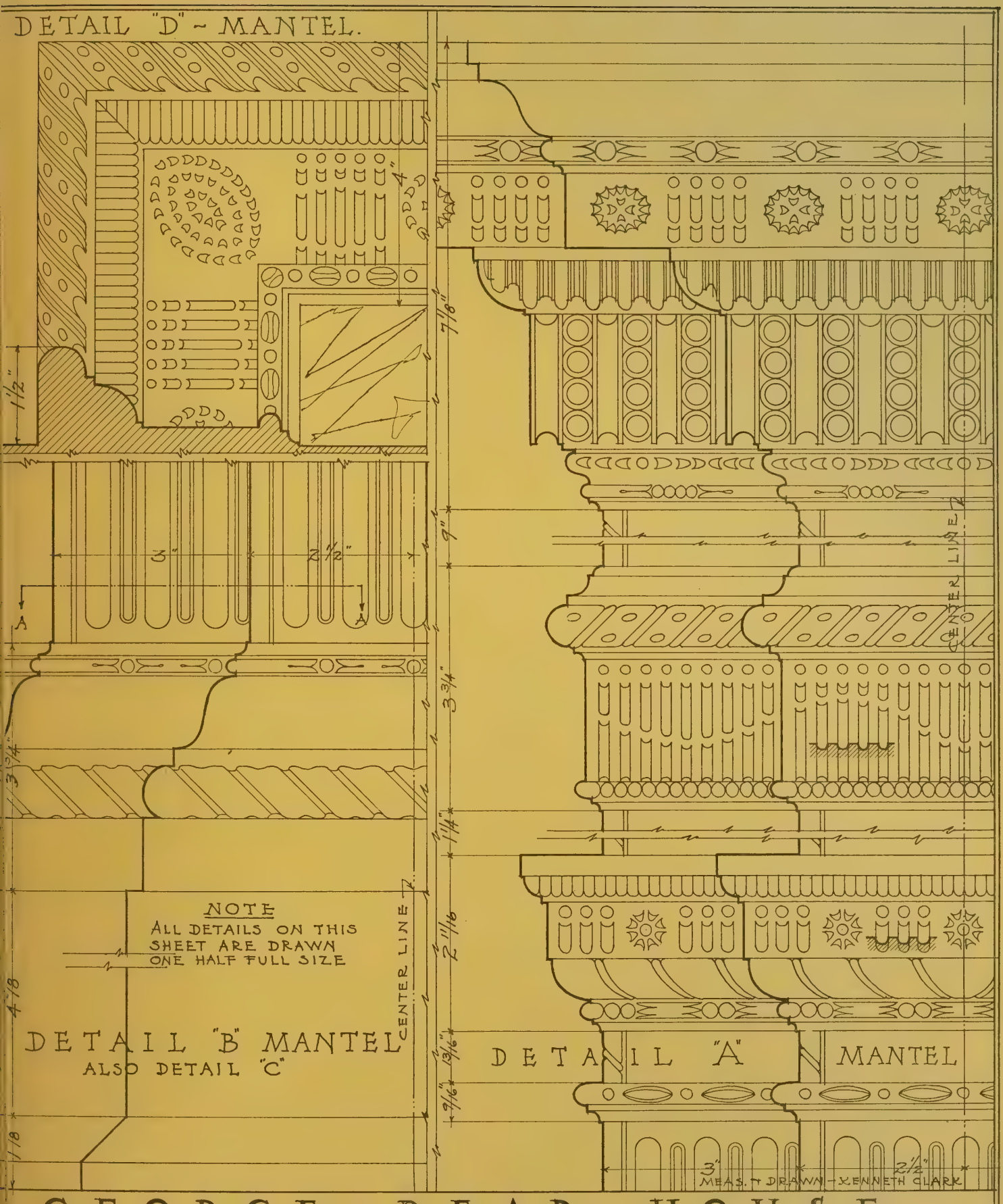
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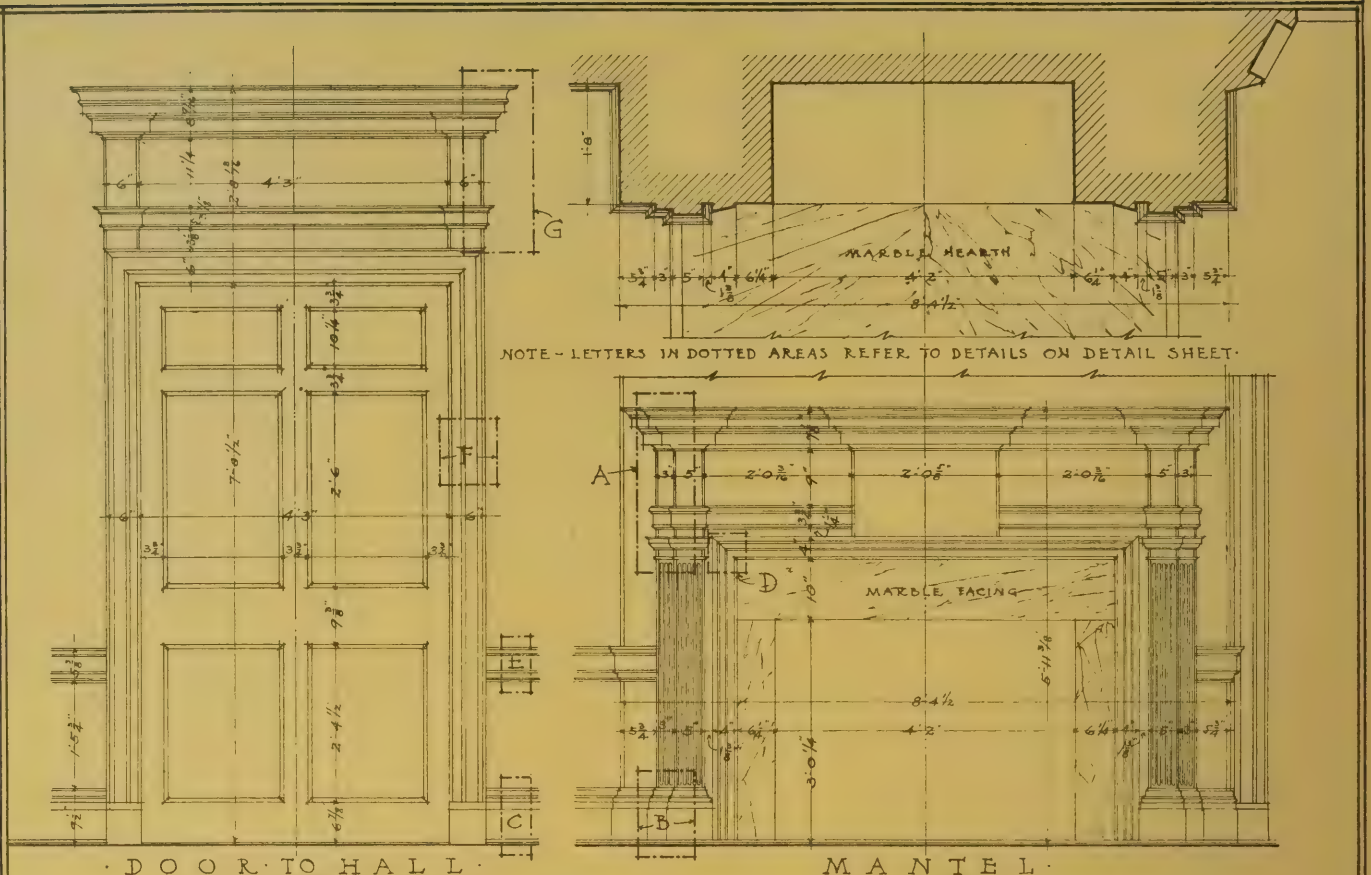
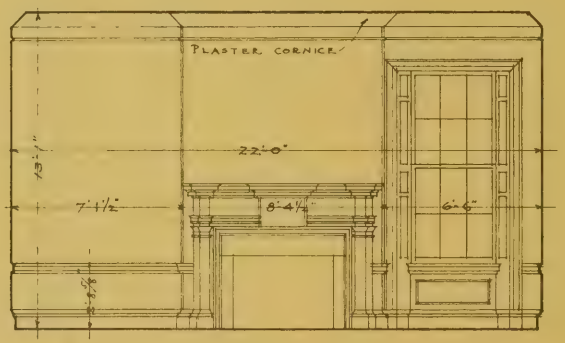


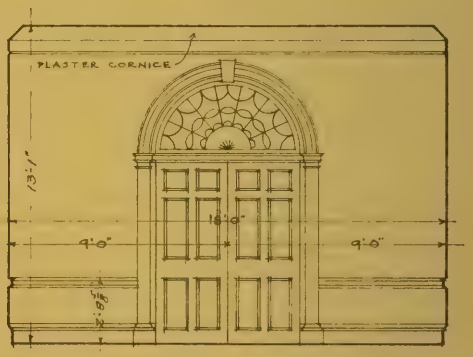
DOOR TO HALL
SCALE 3/8" = 1'-0"

MANTEL
SCALE 3/8" = 1'-0"

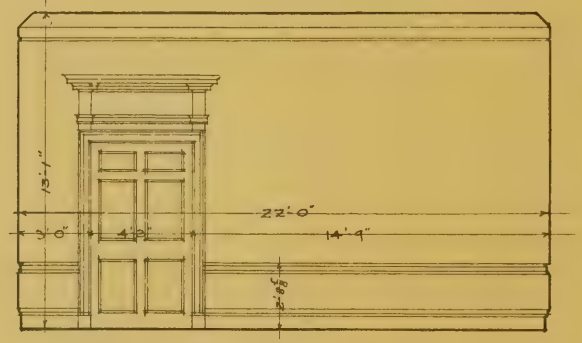
RECEPTION ROOM



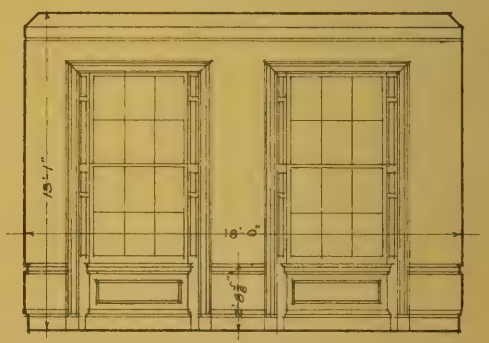
SOUTH WALL
SCALE 1/8" = 1'-0"



WEST WALL
SCALE 1/8" = 1'-0"



NORTH WALL
SCALE 1/8" = 1'-0"



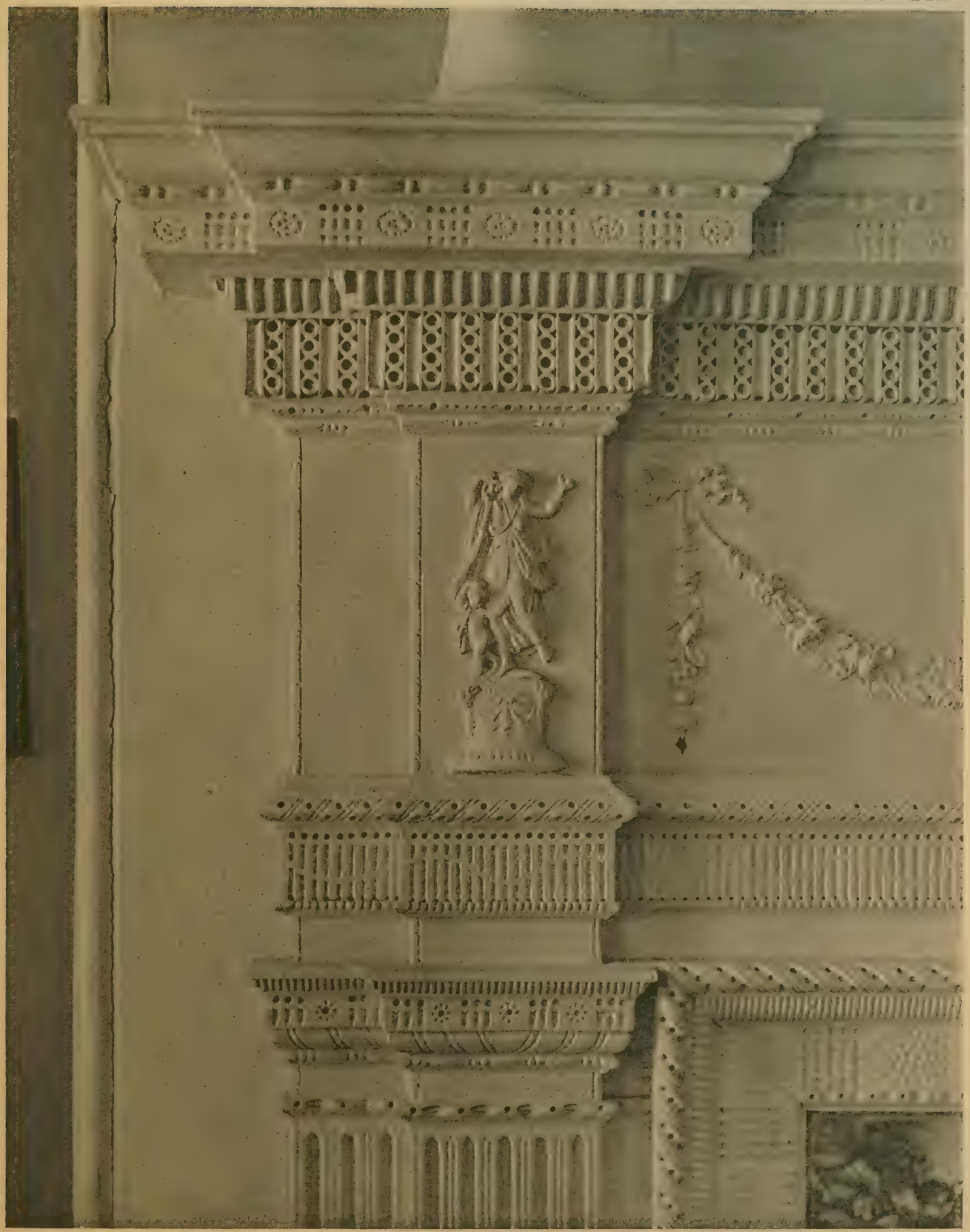
EAST WALL
SCALE 1/8" = 1'-0"

MEAS. & DRAWN - KENNETH CLARK.

THE GEORGE READ HOUSE

NEW CASTLE DELAWARE

Drawing reproduced exactly at the scale marked



DETAIL, A—MANTEL—THE GEORGE READ, II HOUSE, NEW CASTLE, DELAWARE

THE GEORGE READ, II HOUSE, NEW CASTLE, DELAWARE

Detail of Doorway between Reception and Living Rooms

THE GEORGE READ, II HOUSE, NEW CASTLE, DELAWARE

Detail of Stairway at First Floor level

THE GEORGE READ, II HOUSE, NEW CASTLE, DELAWARE

Detail of "Second Floor Drawing Room"

THE GEORGE READ, II HOUSE, NEW CASTLE, DELAWARE

Detail of Doorway, Second Story Hall

GARDEN ENTRANCE DETAIL—THE GEORGE READ, II HOUSE, NEW CASTLE, DELAWARE

Wood Construction Details

Inaugurating a New Factor in Weyerhaeuser Forest Products' Service

WEYERHAEUSER FOREST PRODUCTS begin in this section of The Monograph a series of wood construction drawings with specification notes which have been planned to be of service to the architectural profession and to relate their advertising to the subject of each Monograph. The construction details are supplemented by half tone illustrations and data for the specification writer. Examples of Early American woodwork, exteriors and interiors, have been carefully measured and will be used as the basis of the detailed drawings, showing how modern methods of constructions may be employed to reproduce the letter and the spirit of the old work. The drawings are a digest of the best present day practice in wood construction, but it is not claimed that they show the one and only solution of the particular construction problem. The specification data will suggest the kind or species of wood to be used for the various members which make up the complete design. Heretofore little attention has been given to the inherent qualities of the different species of wood and their special fitness for the service they must perform.

Weyerhaeuser Forest Products advocate conservation and economy through the use of the right wood in its proper place. To this end they aim to furnish the architect with clean-cut information about the qualities of the many species of wood on the market today, and to suggest the best one for a given purpose. This advice will be broad and impartial, as they are not partisans of any one particular species of wood. They will recommend the best lumber for the purpose, whether or not they manufacture it.

In draughting room practice it is essential that the man detailing wood construction should know the actual finished sizes of lumber. The question which is so often raised, or should be, "How thick is a 1" board?" and other questions concerning the sizes which have become actual lumber practice throughout the industry are answered in the tables below. By adhering, as far as possible, to the American Lumber Standard of finished (actual) sizes of lumber, the designer can work with economy and with greater accuracy. He will know that by keeping his details within the actual sizes which are obtainable, the millwork may be manufactured, strictly in accordance with drawings, at a price which is fair to all concerned.

For example: It is impossible to get a *full* dimension 7/8 inch member out of a nominal inch thick piece of wood, or to get a 2 inch thick sash from nominal 2 inch thick lumber. In the first case, it would be necessary to incur the extra expense of using nominal 1 1/4 inch and in the other, nominal 2 1/4 inch thick stock, needless so far as strength and durability are concerned.

Good economical practice in wood construction should be guided by a knowledge of the actual finished, (dressed) sizes of the various types of lumber.

Table Showing Nominal and Actual (Finished or Surfaced) Sizes of "Select" and "Shop" or "Factory" Grades

GENUINE WHITE PINE *and* PONDOSA PINE

NOMINAL THICKNESS	"SELECT" Actual [Dressed] Thickness	"SHOP" OR "FACTORY" Actual [Dressed] Thickness
1 inch —will surface two sides to	25/32 inch	25/32 inch
1 1/4 inch— " " " " "	1 1/8 inch	1 5/32 inch
1 1/2 inch— " " " " "	1 3/8 inch	1 13/32 inch
2 inch — " " " " "	1 3/4 inch	1 26/32 inch
2 1/4 inch— " " " " "	2 1/8 inch	2 1/8 inch
2 1/2 inch— " " " " "	2 3/8 inch	2 3/8 inch
3 inch — " " " " "	2 3/4 inch	2 3/4 inch

Table Showing Nominal and Actual (Finished or Surfaced) Sizes of Dimension and Framing Lumber

DOUGLAS FIR; PACIFIC COAST HEMLOCK; IDAHO FIR AND LARCH; NORTHERN PINE

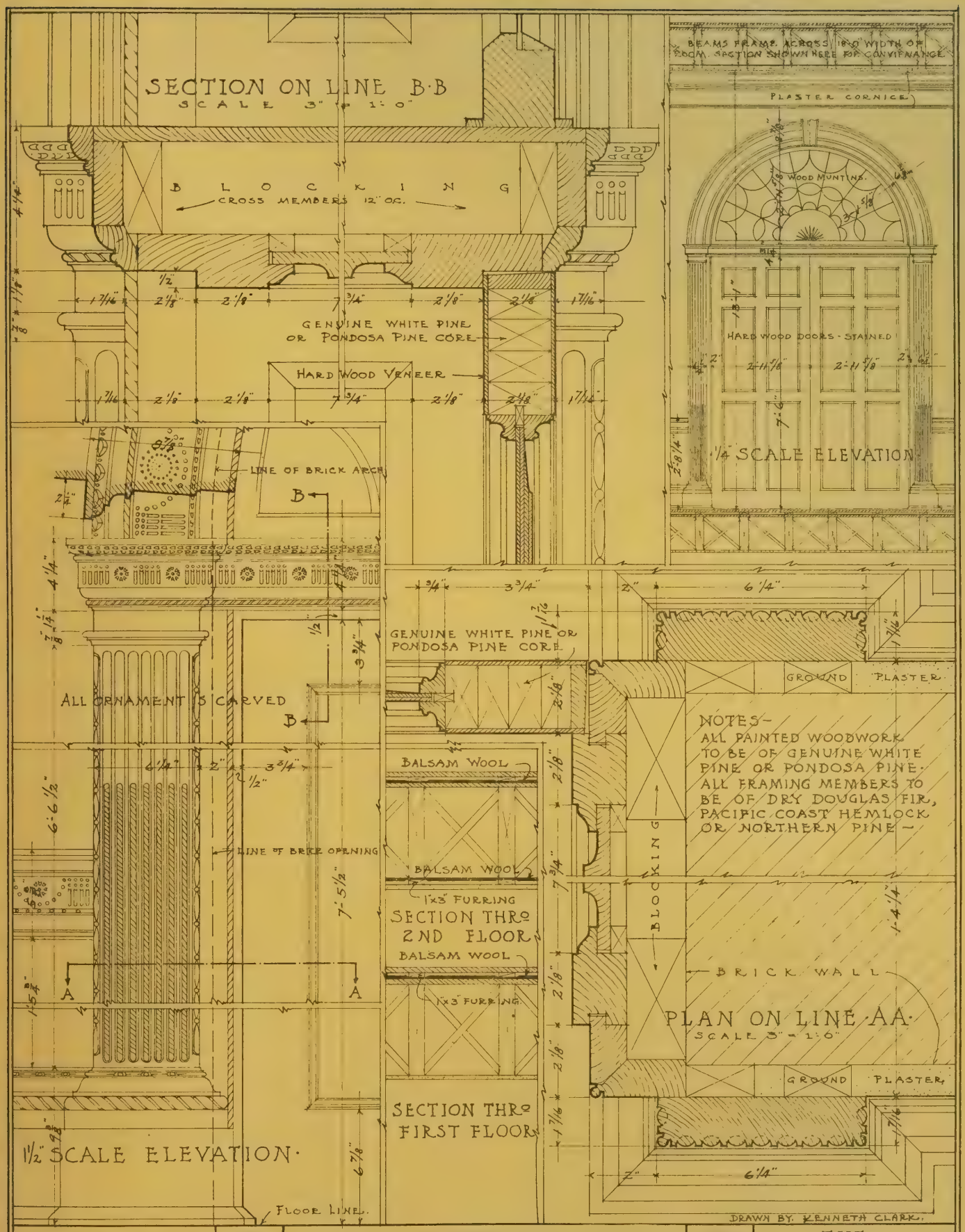
NOMINAL THICKNESS	STANDARD FINISHED THICKNESS, S1S OR S2S	NOMINAL WIDTH	STANDARD FINISHED WIDTHS S1E OR S2E
2 inch	1 5/8 inch	2, 4 & 6 inch	3/8 inch scant of nominal width
		8 inch & wider	1/2 inch " " " "
2 1/2 inch	2 1/8 inch	2, 4 & 6 inch	3/8 inch " " " "
		8 inch & wider	1/2 inch " " " "
3 inch	2 5/8 inch	2, 4 & 6 inch	3/8 inch " " " "
		8 inch & wider	1/2 inch " " " "
4 inch	3 5/8 inch	2, 4 & 6 inch	3/8 inch " " " "
		8 inch & wider	1/2 inch " " " "

Extra Standard 2 inch S1S or S2S to 1 3/4 inch, widths same as Standard.

INTERIOR WOODWORK

WOOD CONSTRUCTION DETAILS
Suggested by
WEYERHAEUSER FOREST PRODUCTS
SAINT PAUL, MINNESOTA

THE GEORGE READ HOUSE
NEW CASTLE - DELEWARE
BUILT A. D. 1810.



INTERIOR WOODWORK

WOOD CONSTRUCTION DETAILS

Suggested by
WEYERHAEUSER FOREST PRODUCTS
SAINT PAUL, MINNESOTA

THE GEORGE READ HOUSE
NEW CASTLE - DELEWARE
BUILT A. D. 1810.

WOOD CONSTRUCTION DETAILS, (*Continued*)

Notes for the Specification Writer

The thoughtless practice of specifying any wood for any purpose no longer meets the present day standard—a standard based, not primarily on first cost, but upon service and ultimate economy. All species of wood that have found their way into the market have their uses, yet none of them possesses exactly the same qualities or the same combination of qualities. With so many different woods available, with so many exacting requirements to be met, there is little wonder that mistakes have been made, unintentional, but costly ones, which may have reflected damagingly upon lumber in general. Weyerhaeuser Forest Products are awake to these conditions, and are endeavoring to protect the architect and his clients from embarrassing and costly experiences by censoring each kind of lumber with respect to the uses for which it is offered for sale.

Interior Trim: Genuine White Pine or Pondosa Pine are suggested for all *inside* trim of the character detailed on the preceding page. Genuine White Pine lends itself to intricate carved ornament a little more readily perhaps, than the general run of Pondosa Pine. Both of these woods are practical and will give service and with the proper selection of stock at the millwork factory, either one will meet the requirements imposed by the details under consideration. The availability of these species of wood, the ease and care with which they can be worked, the ability to "stay put" after once in place and the perfection with which they take and hold paint are qualities which recommend their specification. The following wording is suggested:

> **General:** All lumber used for interior trim, (carved and moulded work, pilasters, casings, plinth blocks, panels, wainscot, etc.,) shall be Genuine White Pine (or Pondosa Pine) having clear faces wherever exposed and shall be of detail as shown on the drawings.

Note: Clear cuttings in both Genuine White Pine and Pondosa Pine are available in the so-called "Factory" or "Shop" grades commonly carried in stock by millwork manufacturers.

Interior Veneered Doors: All interior hardwood veneered doors shall be veneered on cores made from suitable grades of Genuine White Pine or Pondosa Pine properly dried to take glue.

Note: It is neither necessary nor advisable to specify the grades of core stock materials, the species to be used is sufficient. Economical operation of the millwork factory requires complete utilization of all the different sizes, shapes and grades of cuttings that are obtained from the "Factory" or "Shop" type of lumber. The core of a veneered door for example, can be made of short cuttings and they need not be clear as sound knots will not impair their strength.

Interior Paneled Doors, (*Alternate*): If painted doors are preferred to hard wood veneered doors, the specifications should state: "all interior doors to be of clear Genuine White Pine (or Pondosa Pine) cuttings to have solid stiles, rails and panels of detail as shown on the drawings."

Note: For paneled interior doors, clear cuttings in both Genuine White Pine and Pondosa Pine are available in the "Factory" and "Shop" grades.

Framing: All framing timbers shall be No. 1 Common grade Douglas Fir, (or Pacific Coast Hemlock) or (Idaho Fir and Larch) or (Northern Pine) in accordance with the sizes shown on the drawings.

Note: The grade of lumber commonly used for framing timber is called "No. 1 Common." It is not clear lumber for there is no reason why it should be. The so-called defects it contains are such that they do not impair its strength or serviceability in any way.

The selection of the right species of wood for framing purposes is important, as the inherent structural qualities of the different woods varies widely. The species suggested here have proved, together with some other woods, that they have the proper structural qualities. These woods are available and are stocked and sold in grades and sizes suitable for strictly structural uses.

Competitive conditions in different localities will largely determine which one should be used.

The specification writer can find complete technical descriptions of the dimension grades of lumber in the various grading rules published by the different regional lumber associations.

Insulation and Sound Deadening: All floors on wood beams shall be insulated with standard ½-inch thick Balsam-Wool, manufactured by the Wood Conversion Company, as follows:

First Floor: Insulate with 32-inch width Balsam-Wool applied over sub-floor with edges butted together over every other joist. Fur over insulation with 1 inch x 2 inch furring strips over each joist to receive finish floor.

Second Floor: To retard transmission of sound through the second floor, insulate with two layers of Balsam-Wool. The first layer shall be applied on the bottom of the floor joists, edges butted together on every other joist. Fur over insulation with 1 inch x 2 inch furring strips on each joist to receive lath and plaster. The second layer shall be applied over the sub-floor with edges butted together over every other joist. Fur over insulation with 1 inch x 2 inch furring strips over each to joist receive finish floor.

Note: There are different methods of sound deadening floors and frame partition walls and they vary considerably in effectiveness. One method of floor insulation is shown in the floor sections on the preceding page. It is not the best method for maximum results, but it is a practical method, is inexpensive and assures results amply commensurate with the cost.

Balsam-Wool, the sound deadening material recommended is a Weyerhaeuser product. It is efficient both as a sound deadener and as a heat insulator. It is waterproof, fire resistant and sanitary. It is made of pure new wood fibres.

For complete information on Balsam-Wool, for both heat and sound insulation, readers are invited to write for Balsam-Wool Technical Sheets, 1, 2 and 3, which will be sent postpaid on request.

WEYERHAEUSER FOREST PRODUCTS

Merchants National Bank Building

SAINT PAUL, MINNESOTA

WEYERHAEUSER FOREST PRODUCTS

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	Des Moines	MONTANA:	Billings	OHIO:	Cleveland	WEST VIRGINIA:	Clarksburg
MASSACHUSETTS:	Boston	NEBRASKA:	Lincoln		Dayton	WISCONSIN:	Madison
	Springfield		Omaha		Toledo		Milwaukee

SPECIES OF WOODS

WHITE PINE — PONDOSA PINE — IDAHO SPRUCE — DOUGLAS FIR
NORWAY PINE — RED FIR AND LARCH — PACIFIC COAST HEMLOCK — WESTERN RED CEDAR

PRODUCTS MANUFACTURED

ROUGH and FINISHED LUMBER
POSTS, POLES and PILING
"BALSAM-WOOL"—Building Insulation
BOOK, NEWS-PRINT and WRAPPING PAPER

NAME AND LOCATION OF MANUFACTURING PLANTS

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HUMBIRD LUMBER CO., Sandpoint, Idaho
JOHNSON-WENTWORTH CO., Cloquet, Minn.
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The

WHITE PINE

SERIES OF

Architectural Monographs

Volume XII *Number* 1

NEW CASTLE, DELAWARE

AN

Eighteenth Century Town

BY

Wm. D. Foster

AN

Architectural Monograph

NEW CASTLE, DELAWARE

an Eighteenth Century Town

By Wm. D. Foster

Being the FIRST *Number of Volume XII and*
THE SIXTY-FIFTH MONOGRAPH OF

THE WHITE PINE SERIES

Intimate treatiſes of the ARCHITECTURE of the *American Colonies* and of the *Early Republic* preſented with well ordered completeneſs, to further a broader underſtanding and to create a permanent Record of *Early American* ARCHITECTURE.

RUSSELL F. WHITEHEAD, Editor

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NEW YORK

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AMSTEL HOUSE—MAIN FACADE—NEW CASTLE, DELAWARE

Built about 1730

New Castle, Delaware *an* Eighteenth-Century Town

By Wm. D. Foster

THERE are few communities to-day which have retained their early American flavor as completely as has New Castle, Delaware. The examples of our colonial architecture in such centers as Boston and Philadelphia and even in Baltimore are so surrounded by present-day business, or lie isolated without any surroundings, that they can give little of the feeling of the actual community which existed when they were built. Quebec, Salem, Charleston and New Orleans do present, each in certain quarters, this sense of the completeness of the community, but New Castle, being a small town, presents the architecture of the middle colonies even more completely than do these other cities of their respective sections.

Though small now and comparatively little known, New Castle was up to the early part of the nineteenth century quite an important place and her commerce brought considerable wealth to her citizens. Her history had gone back to the earliest settlements, to the time of New Sweden and New Netherland. In fact, at the time Henry Hudson discovered what he termed the "North River"—our Hudson River—he also sailed up the "South River"—to-day the Delaware—and it was on that discovery that the Dutch, for whom Hudson was navigating, based their claims of ownership. However, they were slow to act and the Swedes were the first to establish a colony on the banks of the South River, calling the district New Sweden.

The Dutch did not look upon this settlement with much favor and after the Swedes had been established some eleven years Governor Peter Stuyvesant of New Netherland, in 1651, acting partly on instructions from Holland and largely in accordance with his own vigorous instincts, decided to take active measures to protect the Dutch claims. Accordingly he proceeded personally to New Sweden and established Fort Casimir, very near the site of the present town. There followed various turns of fortune for the fort. The Swedes captured it in 1654, but the Dutch came back and in 1655 gained all of New Sweden, or Delaware, and renamed the settlement Fort Amstel, making it the seat of the Dutch government for the local colonies.

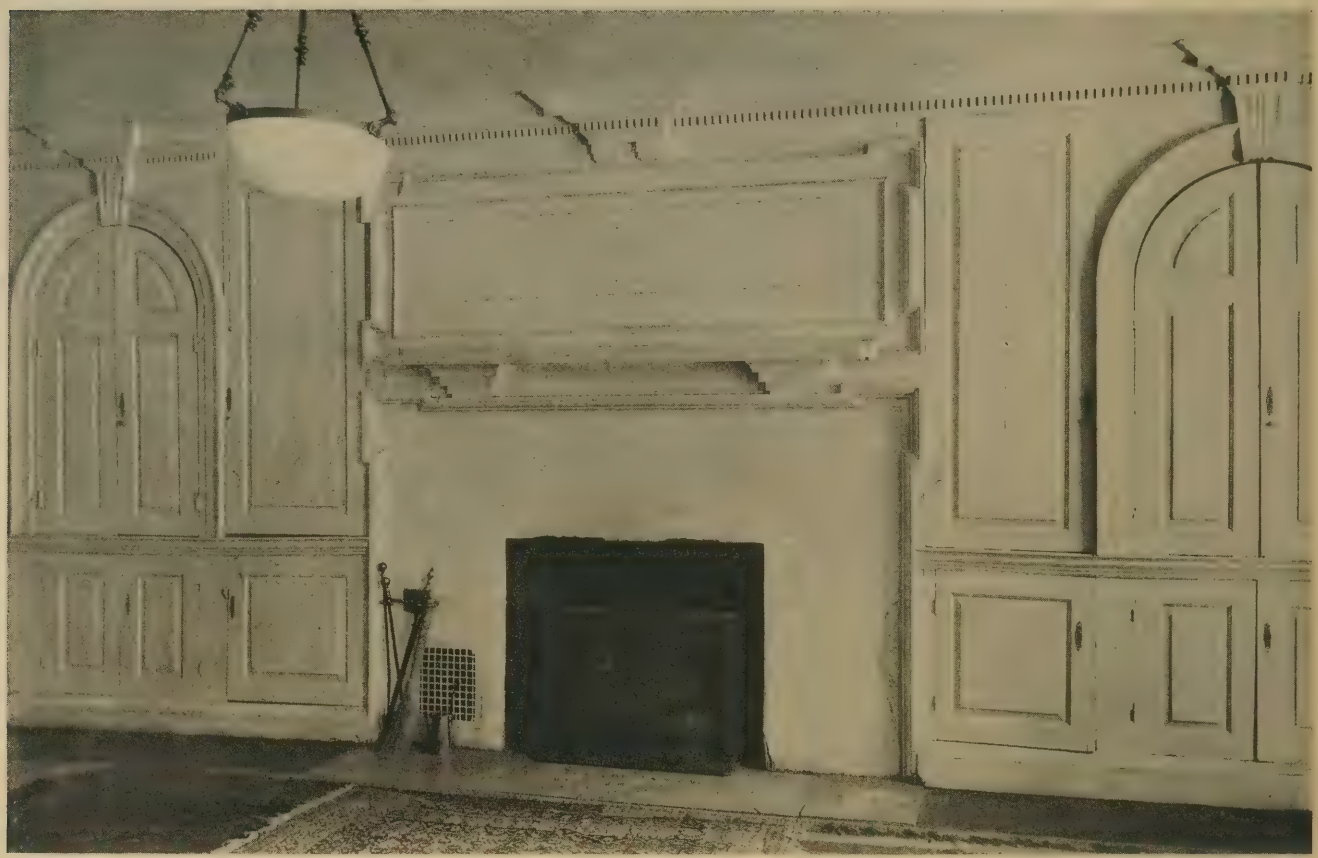
Disease and famine as well as a constant fear of the English caused most of the inhabitants to leave and in 1664 the English seized the whole district without much effort, again changing the name of the principal settlement, this time to New Castle. As New Castle it was frequently the meeting place of the legislature and later became the capital of the colony when Delaware was separated from Pennsylvania.

During the colonial days and the years of the Revolution the town played its part in making history. Two of the signers of the Declaration of Independence were residents, while a third had been born in New Castle.

And yet with this imposing background, as rich as that of many towns which are quite large to-day, New Castle at the end of the eighteenth century was as important as it probably ever will be. The principal industrial growth of the district is being assimilated by Wilmington, six miles to the north. While there are some factories with their resultant nondescript housing, they are all grouped near the branch-line railroad which comes in to the west of the town proper. The compact older portion is still complete and removed from too much "progress."

Around the Common, which remains as an open park in the center of the town, are the public buildings. There is the old Court House, one wing of which is supposed to have been built about 1680, though the main portion dates from 1707. It was this building which served as a center for a twelve-mile radius which established the "northern boundary of the colonies on the Delaware," the arc which still is on the maps. Not far behind the Court House is the Episcopal Church, parts of which were built in 1701 and 1705.

To the east of the Court House is the very interesting square building (Plate LXXXII), generally known as the Town Hall, but which has been put to various uses from time to time. Once it was the terminus of some sort of railroad and again it formed the end of a shed which covered the town market; at that time the fire engine was kept there and the upper floor was used as



PANELLING IN AMSTEL HOUSE, NEW CASTLE, DELAWARE

a town hall or common room. This three-story building, a perfectly simple square brick structure with its charmingly proportioned cupola and the balustraded deck, is as dignified and satisfying a public building as one can find remaining from the colonial period.

One of the principal residential streets is Orange Street, running along the western side of the Common. At Number 2 (pages 10 and 22), facing one end of the Court House, is the house now occupied by Dr. Booker but known historically as the Kensey Johns house, having been built for that gentleman in 1790. The facade is extremely simple but with a fenestration which gives great dignity. The low addition to the right adds considerable interest to the house; it was built as an office for Attorney Johns. This wing contains an entrance hall and one room, a room which with its delightful proportions and arched ceiling testifies to the taste of the builder. The main part of the house has the hall and stairs to the right, with a connecting door to the office, and on the left the living and dining rooms. The kitchen and service rooms are in a wing at the rear.

The panelling and mantels in the two principal rooms are simple, with rather Georgian character in the moldings. The other walls of these rooms are plastered with a dado band carried around, vigorous moldings on the door trims and panelled reveals at the windows. The stairs are interesting, particularly for the very simple manner in which the handrail forms a cap for the newel post.

On the facade we notice one peculiarity which is found in several other houses at New Castle; the marble lintels over the windows, though cut in profile to resemble a flat arch with a keystone, are really of one piece and without any cutting to imitate joints.

The owner is justly proud of the key plates and handles on the main doors, for it is maintained that they are the only ones of that particular design except those at Mount Vernon. In fact, a few years ago, he gave one of these to replace one that had disappeared from Mount Vernon.

Along this same street are several interesting brick facades. These are all similar in design, each has a simple, well-fenestrated wall, a sturdy, well-designed doorway, some richness at the cornice and usually a dormer with pilasters and a small pediment. With their interior panelling, even in rather simple, small rooms,

"THE OLD DUTCH HOUSE" (ABOUT 1665), NEW CASTLE, DELAWARE

THE VAN DYCK HOUSE—NUMBER 400 DELAWARE STREET—NEW CASTLE, DELAWARE

AMSTEL HOUSE—BUILT ABOUT 1730—NEW CASTLE, DELAWARE

CORNER IN MAIN ROOM—AMSTEL HOUSE—NEW CASTLE, DELAWARE

they show the refinement which went with the general affluence of the town during its heyday.

Also on Orange Street is a remainder of the earlier settlement, of a time nearer the pioneer days. It is a little house with its eaves not many feet above the sidewalk and is known as "The Old Dutch House" (Plate LXXIII). Its date is not certain but it is presumed that it was built near the middle of the seventeenth century.

On the other side of the Common and one block beyond is the Strand, another street which was favored as the location for many of the better houses. This street runs more or less along the water front with the back yards of one side continuing down to the river in many places. It is on the Strand that we find the most pretentious house in New Castle, the Read house, which has been fully described in the previous Monograph.

Near the Read house is the four-story building known as the "Parish House" (Plate LXXX). It was built for Charles Thomas a very few years after the completion of the Read house. The facade facing the Strand is similar in detail to many others in the town, the pedimented doorway, the one-pieced keystoned lintels, the modillioned cornice and the single dormer. It does differ in that the doorway is in the middle instead of at one side where it would have permitted the maximum width for a principal room entered from the hallway. However, as it stands on a corner we find that the side elevation becomes quite important, though the designer seemed content with the balance of the front and made little attempt at an axial treatment on the side. The gable, spanning the broader dimension, is cut off at the top by a narrow deck or walk which was probably used for watching the shipping.

The detail of the doorway shows the moldings and ornament which are almost identical with those of the Read house and were undoubtedly done by the same workmen. Few surfaces were left plain. Facias were treated with regular series of gouges, half-round

LIVING ROOM MANTEL—THE VAN DYCK HOUSE, NEW CASTLE, DELAWARE

THE KENSEY JOHNS HOUSE, NEW CASTLE, DELAWARE

moldings were carved with rope-like grooves and pitted with auger holes, while dentil courses were replaced by intricately devised bands of great richness.

In many ways the most interesting house in New Castle is Amstel House (Plates LXXII and LXXV) as the present owners, Prof. and Mrs. H. Hanby Hay, have named it, recalling one of the early names of the town. Very strongly Dutch in the feeling of its detail, it was built about 1730. The wide gable with an angle of about 29 degrees spans what is the main front, though now on a minor street. The rather heavy doorway, the wide muntins and the large curved frieze surface are more like various houses in and around Philadelphia than those in New Castle. There is a great deal of panelling on the interior and it too has a heaviness which is not found in the other houses, though at the same time it is quite interesting. (Page 4 and Plate LXXVI.)

The house at Number 400 Delaware Street (Plate LXXIV), just opposite Amstel House, was built for Nicholas Van Dyck in 1799. It has in recent times been divided for two families by changing a window into a doorway as is seen in the illustration. The mantel (Page 9) is quite ornate and in the piercing of the ornamental bands with auger holes takes its place with the work found in the Read house.

There are a number of other interesting houses along the few streets of New Castle which are similar to those shown here. Fortunately there seems a good chance that they will remain for some time to come, for not only is industry removed but in this older town there is a compactness, with the houses built as close to one another as in a city on plots of narrow frontage, which will keep the newcomer from squeezing in as he has on the larger plots of many of the New England towns.

There is, moreover, another reason for the probable permanence of the town as it now stands, in that there is a real pride and understanding in the community of the architectural heritage represented by these buildings, an appreciation of tradition which is in restful contrast to the incessant changes which are sweeping away so much of our colonial background. New Castle is still the complete setting for the simple and genteel life which brought these eighteenth-century houses into existence.

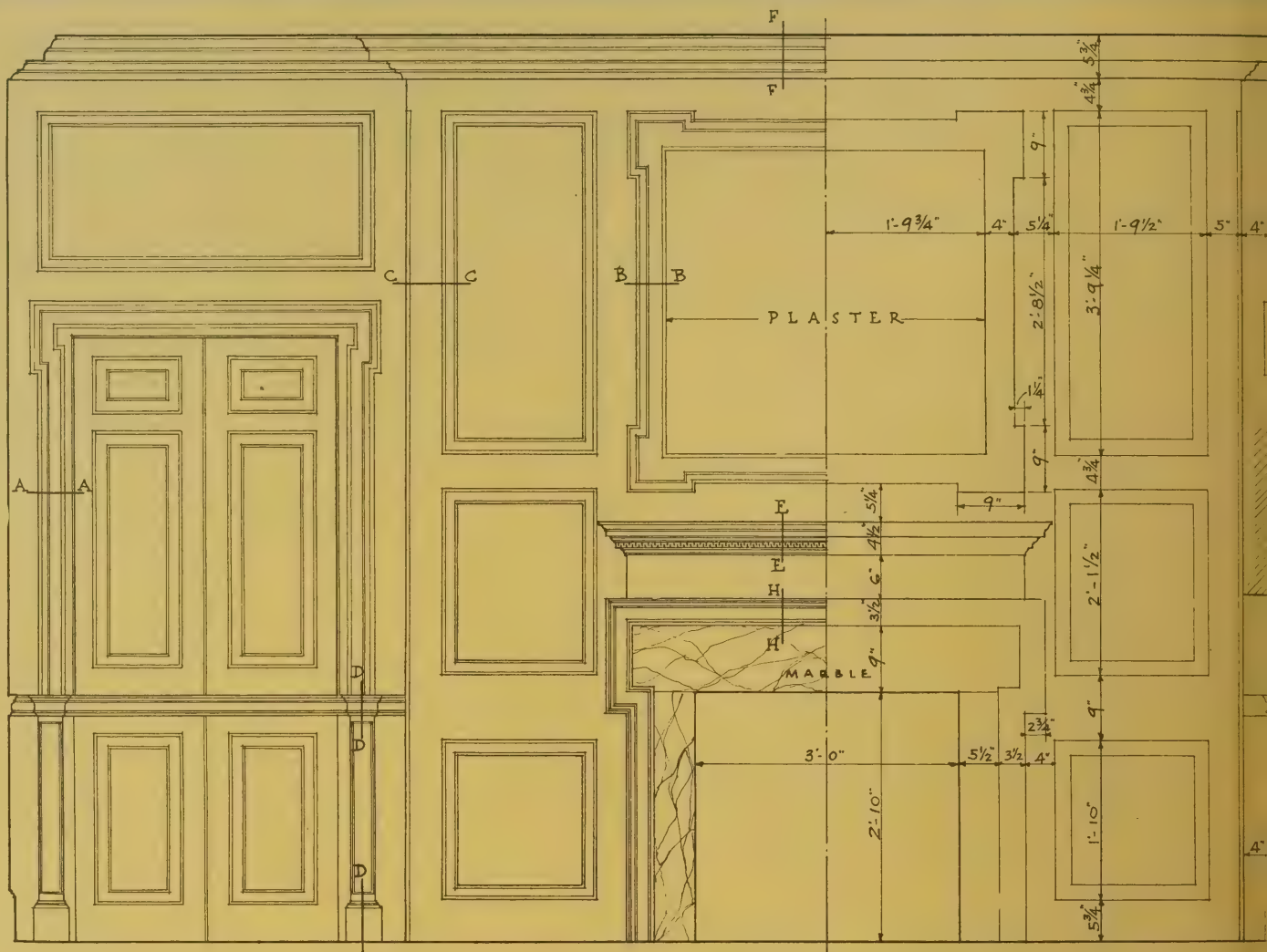
The WHITE PINE SERIES *of*
EARLY AMERICAN DOCUMENTS

With MEASURED DRAWINGS *from*
The George F. Lindsay Collection

The Living Room and the Dining Room of

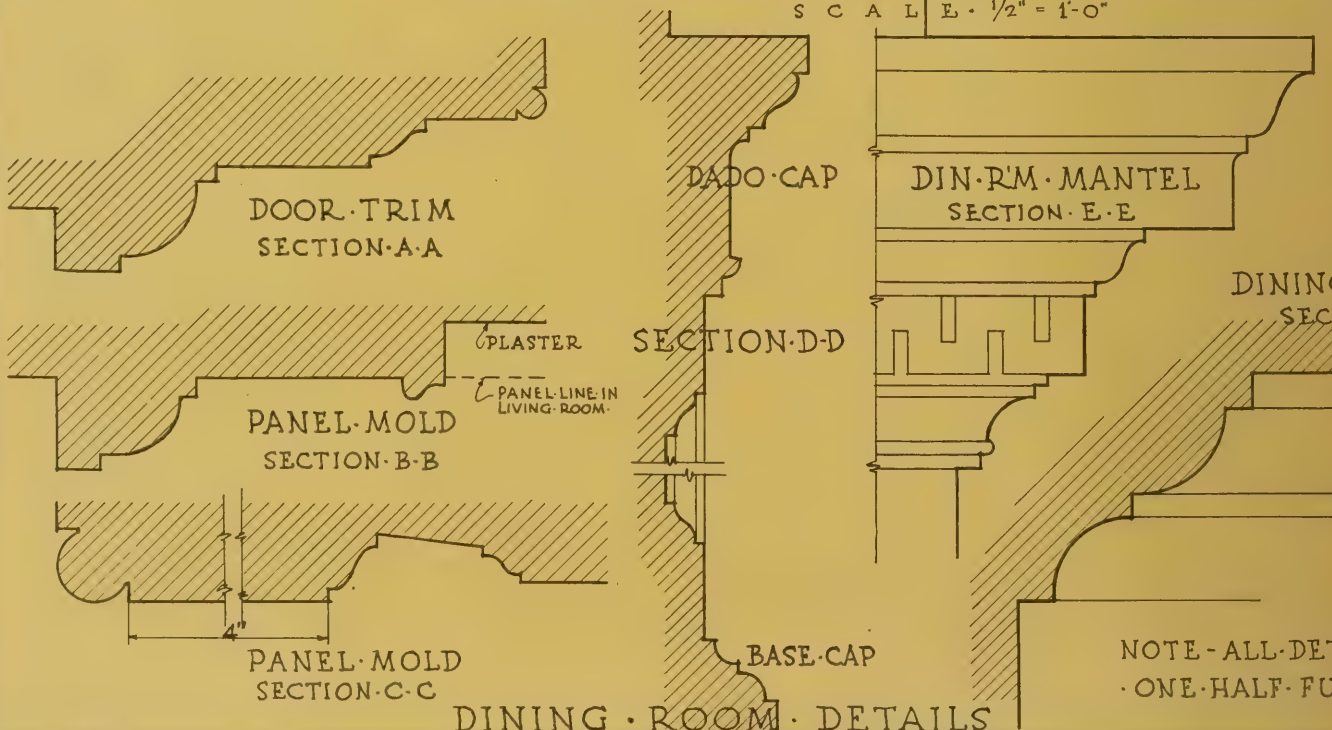
THE KENSEY JOHNS HOUSE
NEW CASTLE, DELAWARE

PANELLING AND MANTEL IN THE DINING ROOM



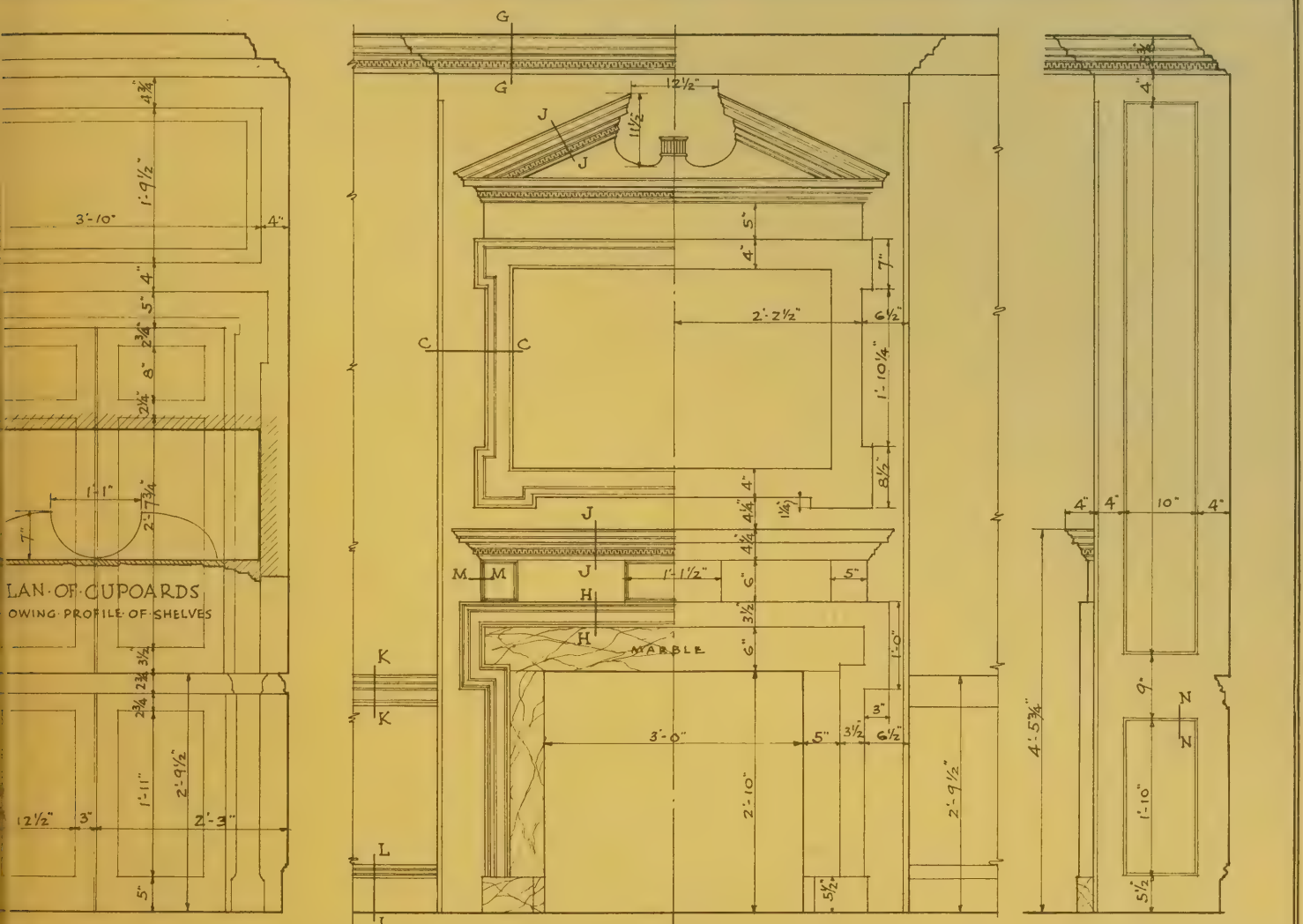
ELEVATION · OF · DINING · ROOM · WALL

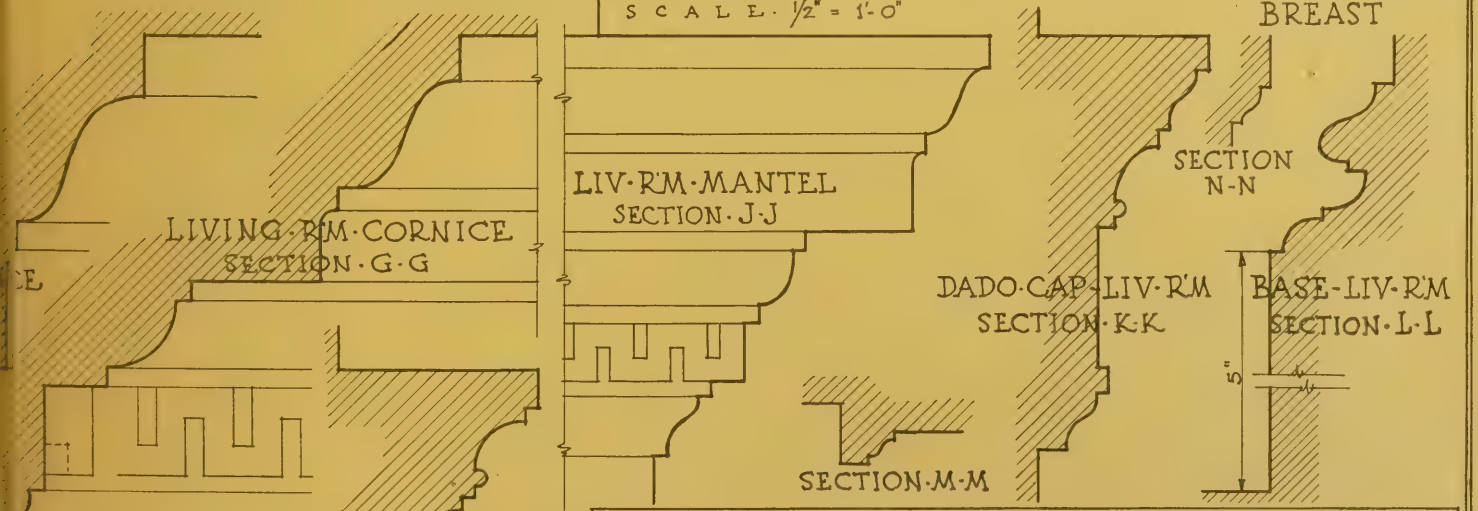
SCALE · ½" = 1'-0"


DOOR · TRIM
SECTION · A · A
PLASTER
PANEL · LINE · IN
LIVING · ROOM
PANEL · MOLD
SECTION · B · B
4"
PANEL · MOLD
SECTION · C · C
DADO · CAP
SECTION · D · D
BASE · CAP
DIN · R'M · MANTEL
SECTION · E · E
DINING · R'M · C
SECTION · F
NOTE - ALL · DETAILS · A
· ONE · HALF · FULL · SIZ

DINING · ROOM · DETAILS

These Drawings are repr



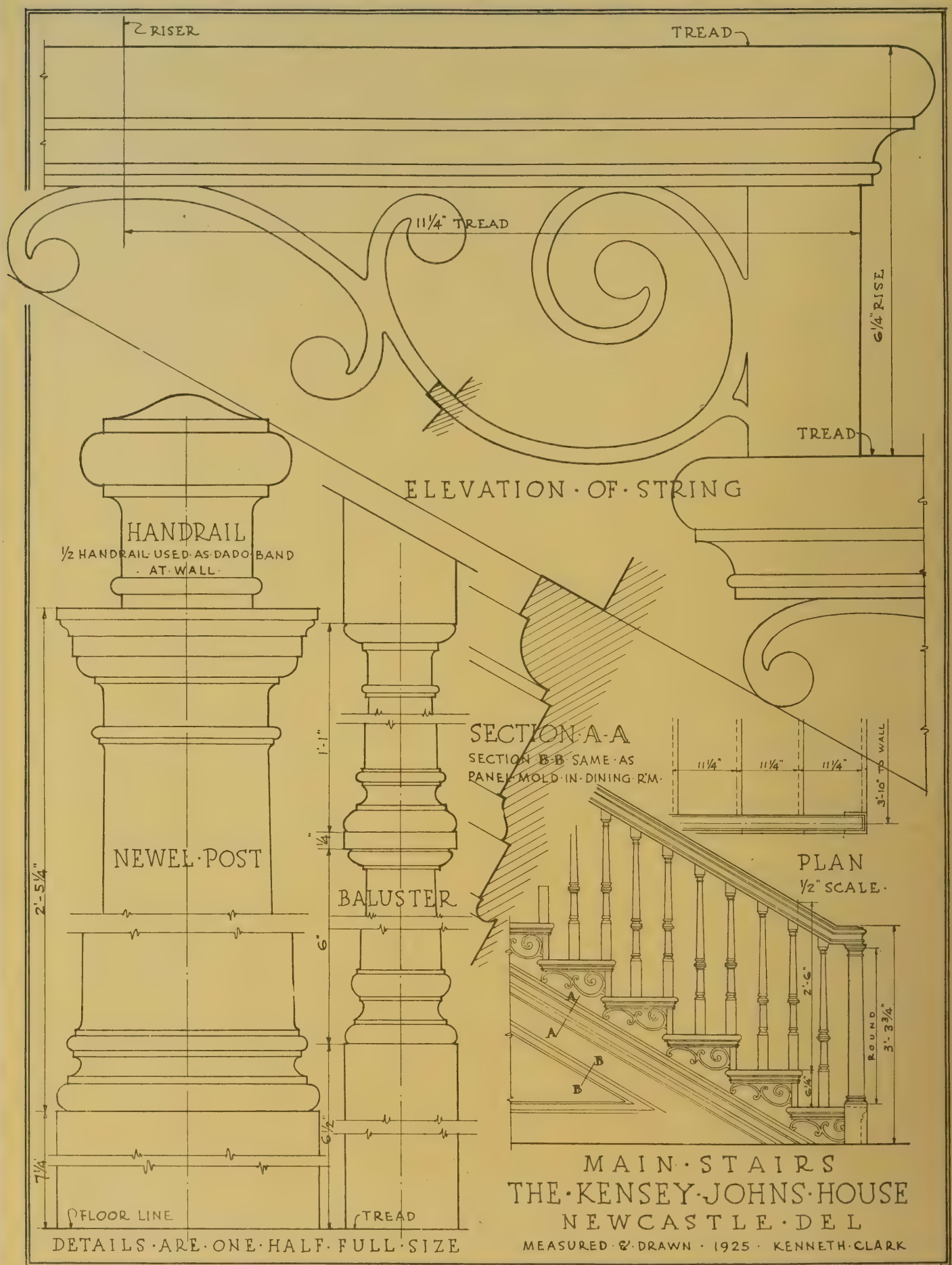


LIVING·ROOM·DETAILS

·THE·
KENSEY·JOHNS·HOUSE
·NEWCASTLE·DEL·

MEASURED AND DRAWN 1925 KENNETH·CLARK

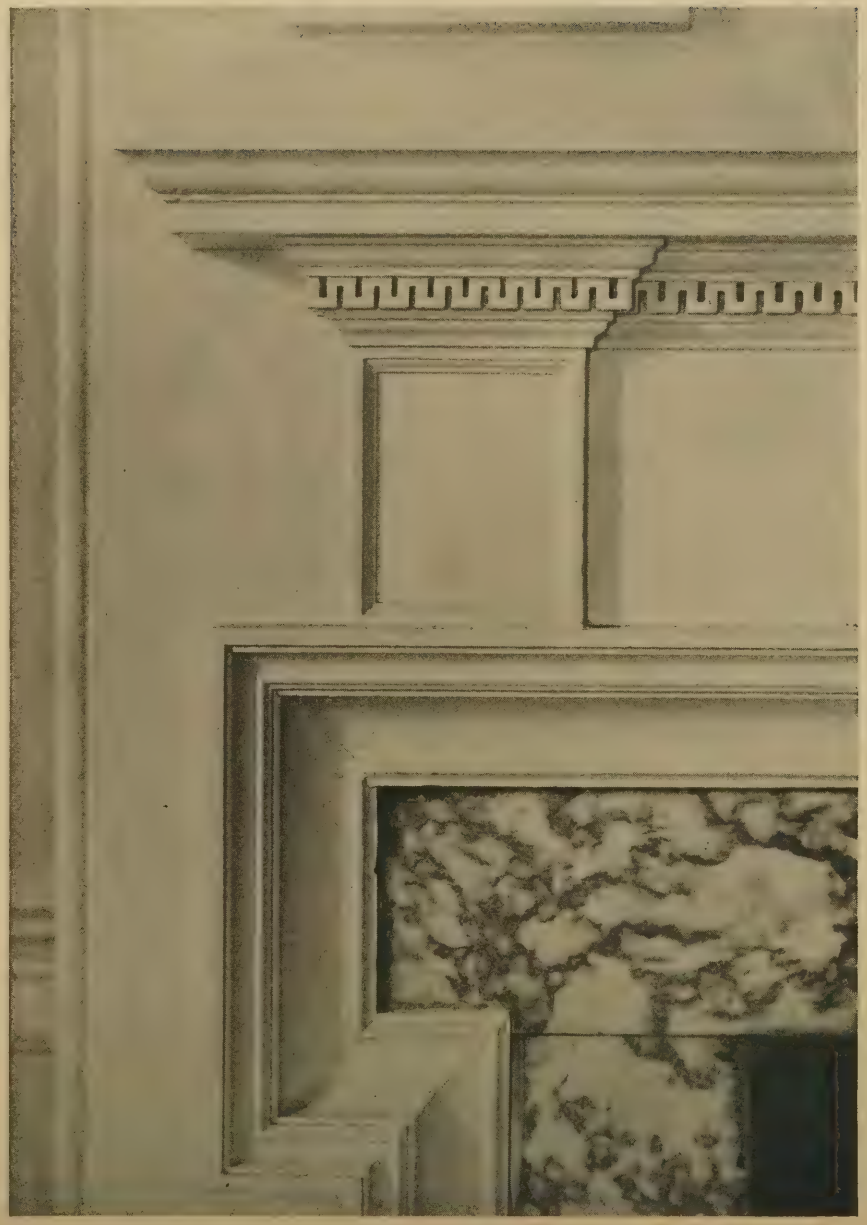
Exactly at the scale marked



Drawing reproduced exactly at the scale marked

LIVING ROOM MANTEL—THE KENSEY JOHNS HOUSE, NEW CASTLE, DELAWARE

(See measured drawing, pages 12-13)



DETAIL OF LIVING ROOM MANTEL *(See measured drawing, pages 12 and 13)*

MAIN STAIRS *(See measured drawing, page 14)*

THE KENSEY JOHNS HOUSE (NUMBER 2 ORANGE STREET), NEW CASTLE, DELAWARE

WINDOW DETAIL—AMSTEL HOUSE (1730)

WINDOW DETAIL—KENSEY JOHNS HOUSE (1790)

NEW CASTLE, DELAWARE—WINDOW DETAILS

THE CHARLES THOMAS HOUSE, NEW CASTLE, DELAWARE

(Built about 1801—*Now called "The Parish House")*

HOUSE AT NUMBER 18 ORANGE STREET, NEW CASTLE, DELAWARE

CUPOLA OF THE TOWN HALL AND MARKET, NEW CASTLE, DELAWARE

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(February, April, June, August, October and December)
by
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FEBRUARY, 1926

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

Of The White Pine Series of Architectural Monographs, published monthly at New York, N. Y., for October 1, 1925.

State of New York } ss.
County of New York }

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Russell F. Whitehead, who, having been duly sworn according to law, deposes and says that he is the owner of The White Pine Series of Architectural Monographs, published by him, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are:

Publisher, Russell F. Whitehead, 150 East Sixty-first Street, New York
Editor, Russell F. Whitehead, 150 East Sixty-first Street, New York
Managing Editor, None.
Business Manager, None.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

Russell F. Whitehead, 150 East Sixty-first Street, New York

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

RUSSELL F. WHITEHEAD.

Sworn to and subscribed before me this 20th day of December, 1925.

[Seal] NORMAN E. WARD.

(My commission expires March 31, 1927.)

"THE WHITE PINE SERIES OF ARCHITECTURAL MONOGRAPHS" has set a high goal for itself—to be "The Origin of the Species" of American architecture. Even as man was chiefly concerned with being and growing for many generations, until the early part of this century, our forefathers were too occupied in maintaining life and in unconsciously laying the foundation upon which our 20th century American architecture was to rest, to allow of much looking backward.

We have now come to the place where we ask "how" ininstead of "what" about our ancestors. We want to know how they lived, how they thought, how they planned and schemed their lives. Of course, books are a guide to answers for these questions, but their revelations are guarded; a writer may say as much or as little as he wishes, leaving pretty much the impression he wants to, but his house is the embodiment of his aspirations and shows unreservedly the mind behind the work. Every man craves to express and perpetuate himself in his dwelling; he puts into it his whole personality and he who would learn what his forefather was like has only to study his house, within and without.

To catch and retain for our descendants this elusive thing, the personality of our ancestors, as expressed in their buildings, we have studied their architecture from the earliest shelters of the Colonists to the charming and sophisticated "mansions" of the early Republic. We find them a fascinating and inspiring record of the growth of the germ of our native art, —a germ that grew and throve in the face of great hardships and handicaps.

We have in our possession tangible evidence of the changes and advancements that came into the lives of the early American; photographs of his houses and furniture, mute but eloquent revelations. We intend to present these treasurers so that the peruser of The Monographs Series will see before his eyes the procession, vivid and splendid, of our development from earliest Colonial days to our eclipse in mid-Victorianism, from which we have recently emerged. We do not aim to issue single copies, but a series of monographs, which, taken as a whole, compose a collection of books on Early American Architecture. The individual monographs might almost be called chapters in the history of Early American Architecture; we want each issue or chapter to be so vital to the subject of the Series that to lack one would make a break in the continuity of the whole.

HELPFUL AND INTELLIGENT ADVERTISING

The Editor cannot end this first Publisher's Page without an acknowledgment to Weyerhaeuser Forest Products for their splendid co-operation. The aim has been to make the advertising copy contained in each issue an integral part of the subject matter—a kind of supplement based on exhaustive research which will enable the builder of today to attain the beauty of yesterday combined with sound construction practices. Weyerhaeuser Forest Products has seen the value not only of emphasizing the merits of their products, but also of presenting construction details and helpful facts about the proper use of wood. The dignity and intelligence evinced by Weyerhaeuser Forest Products in presenting this kind of copy in "The White Pine Series of Architectural Monographs" will undoubtedly impress themselves upon our readers.

Weyerhaeuser Forest Products believe that to be successful, copy must not only be attractive and readable, but also must be of immediate value to the writer of specifications and to the draughting room. The three succeeding pages contain, we feel sure, useful as well as valuable information.

·WOOD·CONSTRUCTION·DETAILS·

SUGGESTED BY

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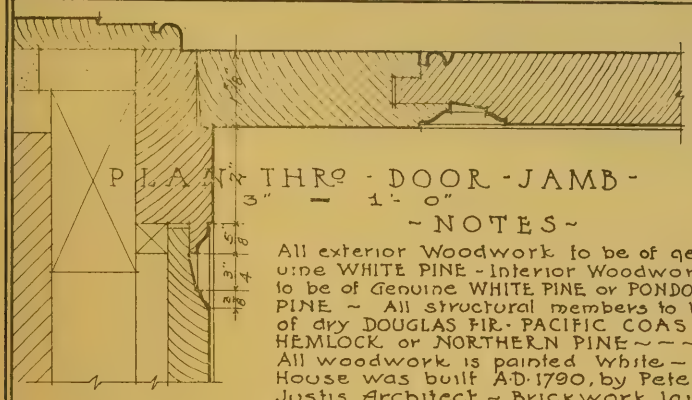
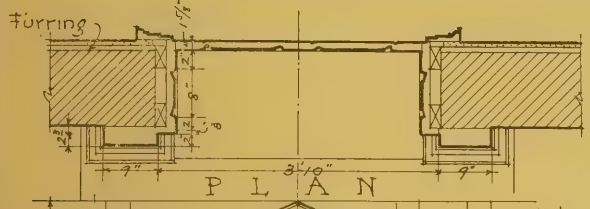
SAINT·PAUL·MINNESOTA

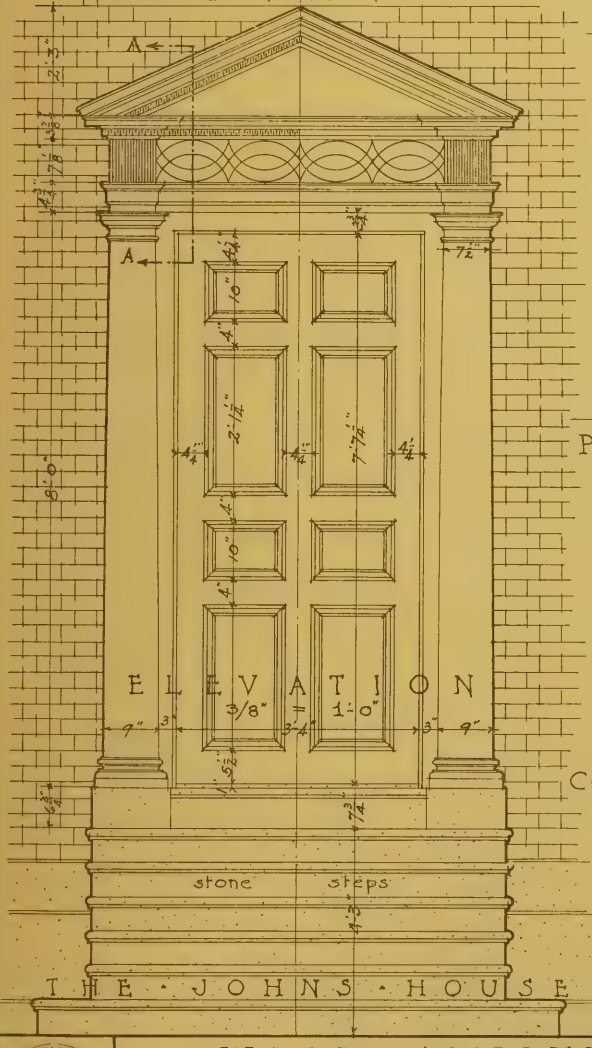


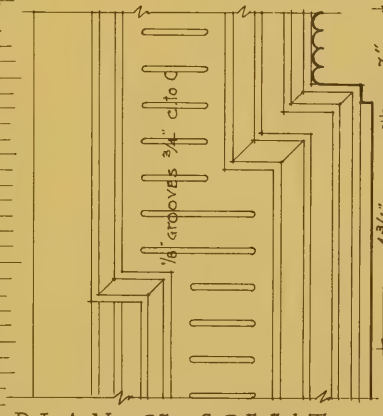
PLAN THRO · DOOR · JAMB ·
3" = 1'-0"

~ NOTES ~

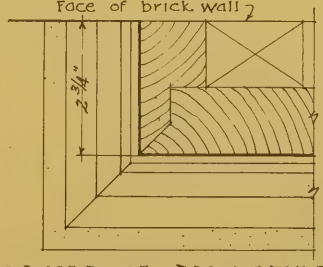
All exterior Woodwork to be of genuine WHITE PINE - Interior Woodwork to be of Genuine WHITE PINE or PONDOSA PINE ~ All structural members to be of dry DOUGLAS FIR · PACIFIC COAST HEMLOCK or NORTHERN PINE ~ ~ ~ ~ All woodwork is painted White ~ ~ House was built A·D·1790, by Peter Justis Architect ~ Brickwork laid Flemish Bond with 1/4" white mortar joints slightly raked ~ Bricks, dark red ~ According to the records, the builders were G. Vansandt & J. Baldwin ~



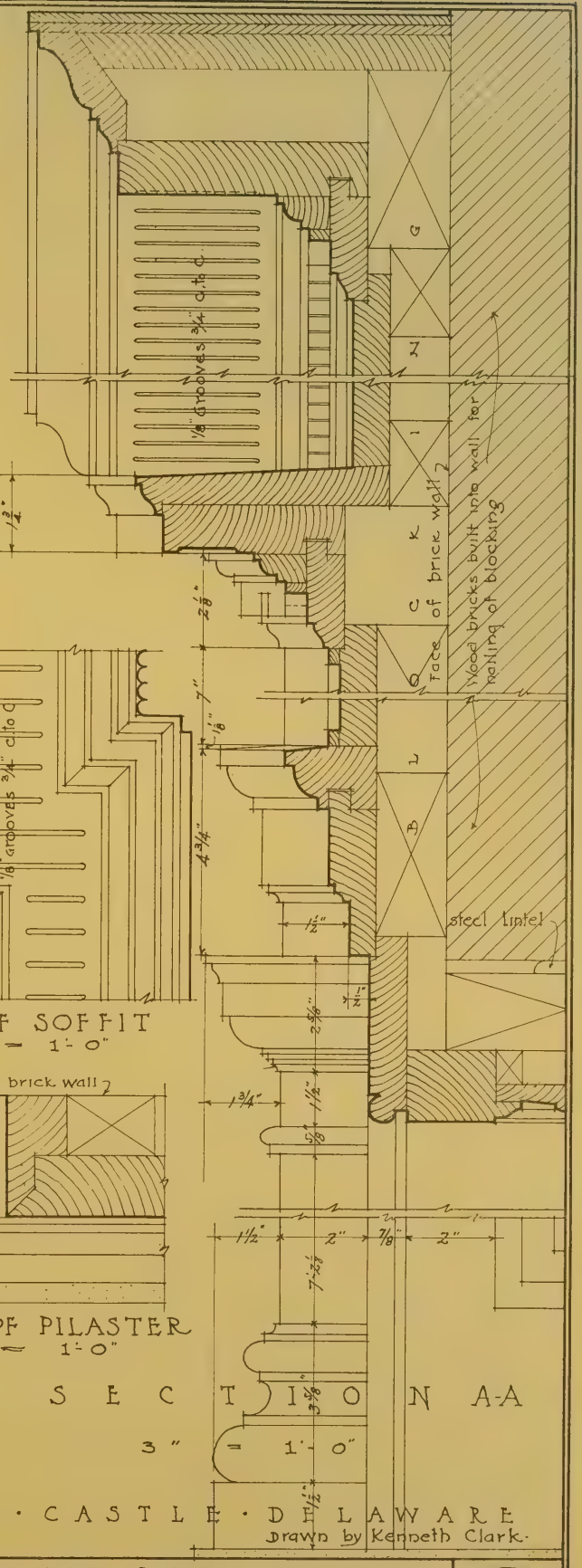




PLAN OF SOFFIT
3" = 1'-0"



CORNER OF PILASTER
3" = 1'-0"



SECTION A-A
3" = 1'-0"

THE · JOHNS · HOUSE · NEW · CASTLE · DELAWARE

Drawn by Kenneth Clark.

· WOOD · CONSTRUCTION · DETAILS ·
SUGGESTED BY
WEYERHAEUSER · FOREST · PRODUCTS
SAINT · PAUL · MINNESOTA

Wood Construction Details

Notes for the Specification Writer

The thoughtless practice of specifying any wood for any purpose no longer meets the present day standard—a standard based, not primarily on first cost, but upon service and ultimate economy. All species of wood that have found their way into the market have their uses, yet none of them possesses exactly the same qualities or the same combination of qualities. With so many different woods available, with so many exacting requirements to be met, there is little wonder that mistakes have been made, unintentional, but costly ones, which may have reflected damagingly upon lumber in general. Weyerhaeuser Forest Products is awake to these conditions, and is endeavoring to protect the architect and his clients from embarrassing and costly experiences by censoring each kind of lumber with respect to the uses for which it is offered for sale.

Exterior Trim: The old Colonial work offers such abundant proof of the durability of White Pine under exposure to weather, in contrast to the much too abundant short-lived construction of the present day that there is really no room for argument as to which kind of lumber is best for exterior trim. Equally convincing is the proof we find all about us of the ability of White Pine to "stay put" without grain raising and without splitting; its ability to take and hold paint; to work readily even to the most intricate detail and to preserve the freshness of this detail over generations of exposure.

It should be born in mind, however, that there has been a great deal of lumber sold *as* White Pine which is, in reality not White Pine at all, and that of the three commercially important species of *Genuine* White Pine, only two are recommended for use under exposure. Therefore, to meet this situation and adequately to protect the architect in securing the real thing, the following specification is suggested:

Specification: "All lumber used for exterior trim (including cornice, carved and moulded work, pilasters, casings, plinth blocks, panels, etc.) shall be Genuine White Pine of Weyerhaeuser standard of manufacture, and shall be either Northern White Pine (Pinus Strobus) or Idaho White Pine (Pinus Monticola), having clear faces wherever exposed, free from sap and shall be of detail as shown."

Note: The phrase "Weyerhaeuser Standard of manufacture" is suggested as a means of protecting the buyer, because Weyerhaeuser White Pine Mills are now stamping each piece in the better grades of Genuine White Pine with a species mark, "Genuine White Pine" in addition to the manufacturer's trade mark.

It is not necessary to specify the grade of lumber to be used other than is done above for the reason that clear cuttings can be secured most economically by the millwork manufacturer from the so-called "Shop" or "Factory" grades.

Window Frames: For window frames it is peculiarly essential to use a durable wood and White Pine is therefore recommended without substitutes for all exposed parts such as sills, etc. Again, the grade of material from which the frames are to be worked may safely be left to the millwork manufacturer except as provided for as follows:

Specification: "All window frames shall be manufactured from Genuine White Pine of Weyerhaeuser standard either Northern White Pine (Pinus Strobus) or Idaho White Pine (Pinus Monticola), of suitable grade, free from sap and with clear faces wherever exposed, made to sizes and as per detail shown on drawings."

Exterior Doors: For outside doors the solid Genuine White Pine door is recommended without alternative, in the following suggested specification.

Specification: "All exterior doors shall be made from clear cuttings of Genuine White Pine of Weyerhaeuser standard, either Northern White Pine (Pinus Strobus) or Idaho White Pine (Pinus Monticola) with solid stiles and rails and panels of detail shown on drawings."

Framing: The grade of lumber commonly used for framing timber is called "No. 1 Common." It is not clear lumber for there is no reason why it should be. The so-called defects it contains are such that they do not impair its strength or serviceability in any way.

The selection of the right species of wood for framing purposes is important as the inherent structural qualities of the different woods varies widely. The species suggested here have proved, together with some other woods, that they have the proper structural qualities. These woods are available and are stocked and sold in grades and sizes suitable for strictly structural uses.

Competitive conditions in different localities will largely determine which one should be used.

Specification: "All framing members shall be No. 1 Common grade, Douglas Fir (or Pacific Coast Hemlock) or (Idaho Fir and Larch) or (Northern Pine) of sizes shown on the drawings."

Insulation: It may be a new thought to many that exterior brick walls should be insulated. Various researches on the subject have proven conclusively, however, that approximately 31% more heat escapes through an uninsulated 8″ brick wall than through the ordinary uninsulated frame wall. The reason, of course, is not hard to understand. Brick is a conductor of heat. It is also porous enough to absorb moisture, which, if anything, increases its conductivity.

Tests on actual wall sections show that the result of insulating a 8″ brick wall with one layer of Balsam-Wool is to reduce the heat loss 59% from which it would appear that the elimination of "cold, damp walls" and the reduction in the amount of fuel required to heat the *uninsulated* house make insulation a matter not of expense, but of comfort and actual economy.

Specification: "Insulate the inside faces of all brick side walls with 32″ (width) Balsam-Wool, applied vertically over 1 x 2 furring strips set 16″ O. C. with edges butted together on every other strip and fur over Balsam-Wool to seal joints and receive lath and plaster."

Note: Balsam-Wool is a Weyerhaeuser product. It is efficient both as a heat insulator and as a sound deadener. It is waterproof, fire resistant and sanitary. It is made of pure, new wood fibres.

For complete information about Balsam-Wool write for Balsam-Wool Technical Sheets 1, 2 and 3, which will be sent postpaid on request.

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NORWAY PINE	RED FIR AND LARCH	PACIFIC COAST HEMLOCK	WESTERN RED CEDAR

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WHITE PINE

SERIES OF

Architectural Monographs

Volume XII *Number* 2

FARMINGTON CONNECTICUT

BY

Wesley Sherwood Bessell

AN

Architectural Monograph

FARMINGTON CONNECTICUT

By Wesley Sherwood Bessell

Being the SECOND *Number of Volume XII and*
THE SIXTY-SIXTH MONOGRAPH OF

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RUSSELL F. WHITEHEAD, Editor

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NEW YORK

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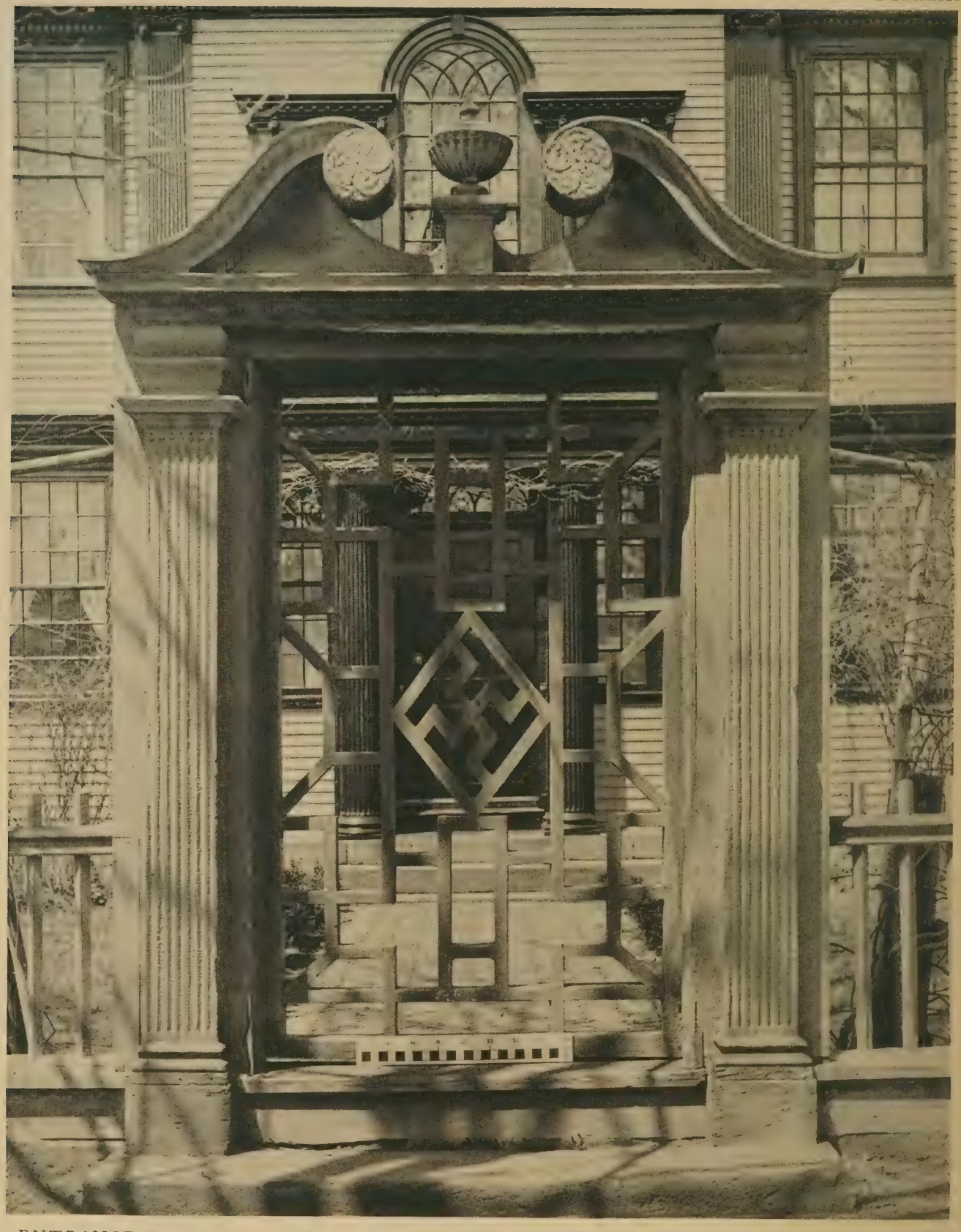


ENTRANCE GATEWAY—THE ADMIRAL COWLES HOUSE, FARMINGTON, CONNECTICUT

Farmington, Connecticut

By Wesley Sherwood Bessell

FARMINGTON! why did my thoughts constantly revert to Farmington, what was there to cause such a persistent subconscious recalling of the place? Here I was, thousands of miles away from that village, in a beautiful old town of France—Chartres, in fact, and all day long I had worked on procuring measured drawings of its lovely bits of detail, sketching its architecture and absorbing its past history, wandering through its cathedral and gazing upon its pulpit. By George! that's it, the pulpit, how it all came back to me now, as I lay stretched out upon my bed in a low ceilinged room of the Inn where I was sojourning after a full day of joy and of inspiring study, and now dead tired.

I understood clearly now; Chartres, with its centuries old history, its traditions, its beauty and its architecture brought home vividly our own lack of something to show and leave to the world. I could not help thinking of how ridiculous it would be to travel the distance I had, and to register at an hotel in Passaic, New Jersey, or Nyack, New York, or Lansing, Michigan, in order that I might study our own architecture and make measured drawings of its mouldings and become enthralled by it all.

Then my mind reverted again to Farmington and the few years I lived there, and really after all, there were places one could kick up an interest in, but how few and how meagre and small the number of examples in such communities. Still there was Farmington, it had probably more to show than the average.

Oh yes, that's it, that pulpit in the old church, I must be drowsy after my day, in fact I must have fallen asleep, for I was sitting stiff backed in one of the pews of the old church, the church upon completion of which the builder was paid partly by a hogshead of rum. Shades of Volstead, think of it, yes sir, it was the old minister delivering his sermon, pounding now upon the rail of that pulpit with its beautiful old Colonial detail; through the circular headed window the warm spring sun streamed into the church, the windows were open and one could hear the song of happy young birds. Old Abigail Potter made that pulpit, and what a wonderful bit of work it was, he loved it, was proud of it, and had enjoyed the work of doing it. I must stand up, the old minister is through, wonder what he said? That pulpit certainly diverted my mind from the sermon. Oh there, going out now, what a delightful day, there is old Captain Gibbons, he is working on that new canal that is going to connect Farmington with New Haven. Must be discussing it with his friends. He lives in the house on Farmington Avenue. Oh yes, he's just had an old knocker made of brass and lettered with his name for the front door, he needs it too, I spent many moments trying to make him hear my knock on the door, getting sore knuckles for my efforts.

Guess I must start meandering down the road a bit, been invited to dinner at the Cowles'. My how Abigail loves to surprise us, just look at that door to the Deming house, has pilaster caps, all of his own conception, but what a lovely solid panelled door, hope no one ever destroys it, the whole door is rather exceptional, but then doorways are so alluring to work on. Just look at that one of Gay's, the panelling almost like the Demmings', but entirely different, and then the door on Obadiah Alcorn's without a cap, what a lovely fence too. The cornice also is interesting, remember how they struggled over the bracket at the corner, don't think there is another like it.

Up through the trees on the upper street, I see the old Whitman house with that overhanging second floor; we have only an Indian here and there now, but a few years back they used to shoot Indians through a hole from the second floor in that overhang, but I must be getting along, the old town is full of those bits of Colonial details, cornices, doorways, rain-water heads, and I must make some sketches here some day. There is the house of General Cowles with two curious features, the front door with its inverted columns and the side porch with its five columns and pediment. How that centre column seems to hold up the Palladian window in the pediment, and what a thin amount of masonry over those arches at the porch floor level. Still, the whole thing looks well, and quite like Charleston. It's a stranger in our Northern village, but very welcome.

And now I am at the gate of Admiral Cowles' resi-

dence where I am to dine. No gate quite like this one, you know, the house was the product of a young English Army officer while stationed over here during the Revolution, who must have been an architect in England, drafted into the service. He left his imprint by way of the Cowles' house; he must have been in India too, see the swastika worked into the gate. I knock at the front door and am admitted, it's a lovely bit of atmosphere that greets me; how hungry I am, and how I shall enjoy eating in such surroundings. Food tastes so different, doesn't it, in a pure white Colonial room with panelled walls and beautiful doors, and a lovely detailed cornice? Yes sir, that was a meal, and I am about to depart, the front door is open, and that gate through the front door, is it not a picture?

Well, as I step toward this sunlight, the picture begins to fade, I feel a sense of impending danger, things begin to look dark, I am hungry, ah, I know, I was dreaming. I am in France at Chartres, but, I am also still hungry, hungry for a return of our delightful old village, thousands of miles is a long way to travel for inspiration; it ought to be near at home. Well there are a few villages offering their wealth, and of these few still left, one is Farmington.

"THE GATE THROUGH THE FRONT DOOR"

THE ADMIRAL COWLES HOUSE, FARMINGTON, CONNECTICUT

THE WHITMAN HOUSE, FARMINGTON, CONNECTICUT

ENTRANCE DOORWAY DETAIL—THE DEMING HOUSE, FARMINGTON, CONNECTICUT

BRACKET AND DROP DETAIL—THE "OLDER" COWLES HOUSE, FARMINGTON, CONNECTICUT

[*Built about* 1661]

THE ADMIRAL COWLES HOUSE

OBADIAH ALCORN HOUSE

CORNICE AND LEADER HEAD DETAILS—FARMINGTON, CONNECTICUT

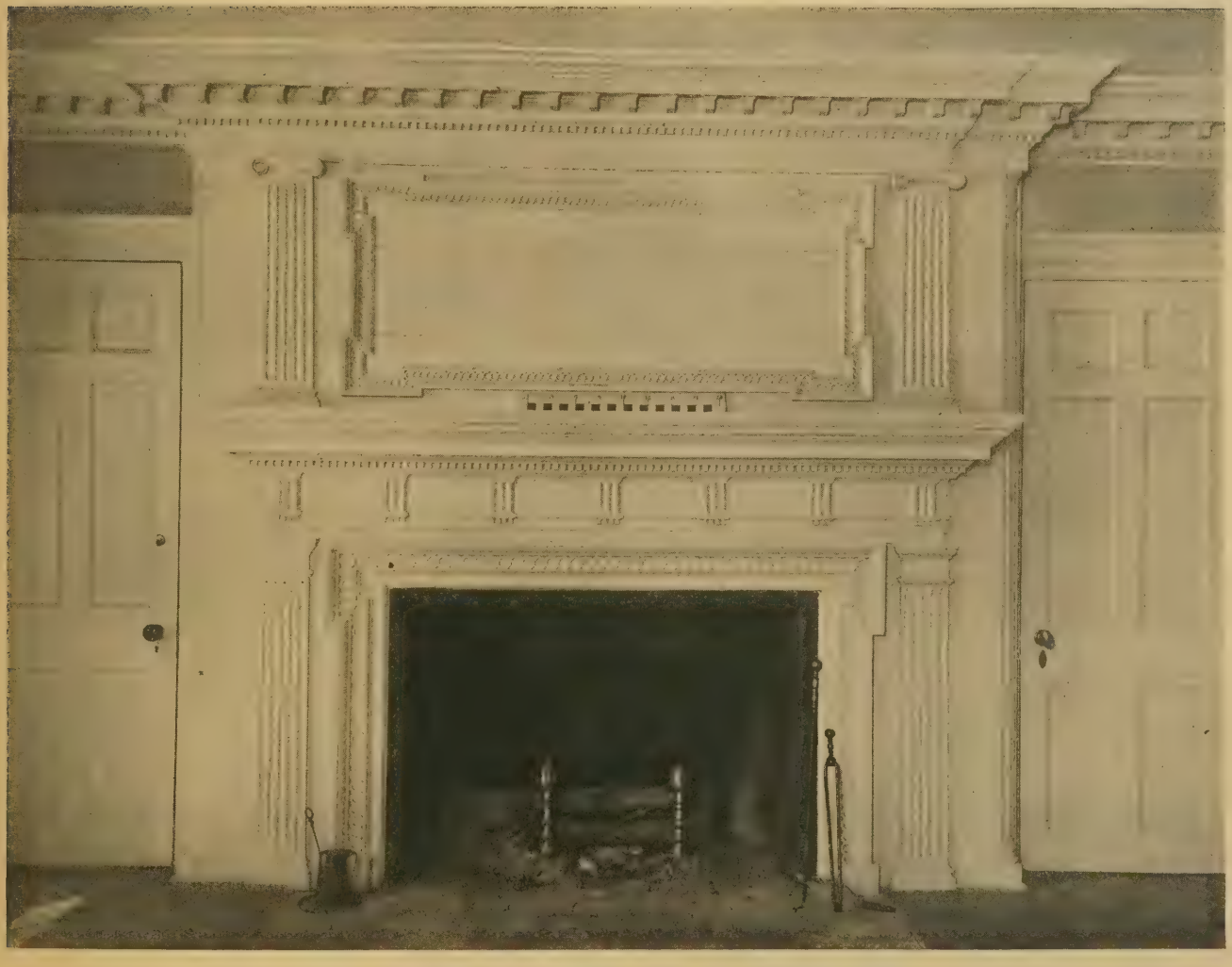
CORNICE AND LEADER HEAD DETAIL—HOUSE AT FARMINGTON, CONNECTICUT

ENTRANCE DOORWAY—OBADIAH ALCORN HOUSE, FARMINGTON, CONNECTICUT

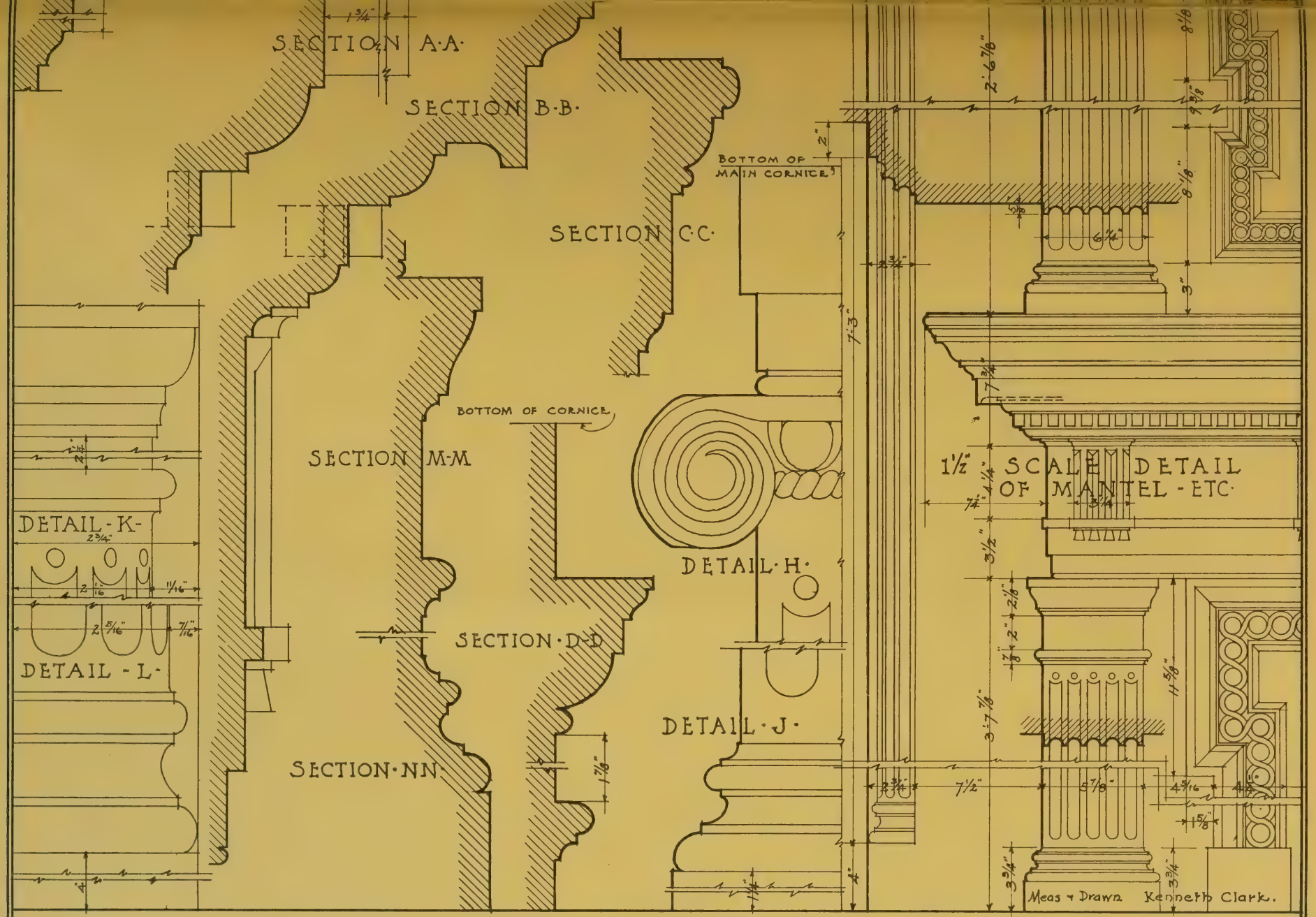
The WHITE PINE SERIES *of*
EARLY AMERICAN DOCUMENTS

With MEASURED DRAWINGS *from*
The George F. Lindsay Collection

The West Parlor and the Hall of
THE COWLES-LEWIS HOUSE



MANTELPIECE SIDE OF THE WEST PARLOR

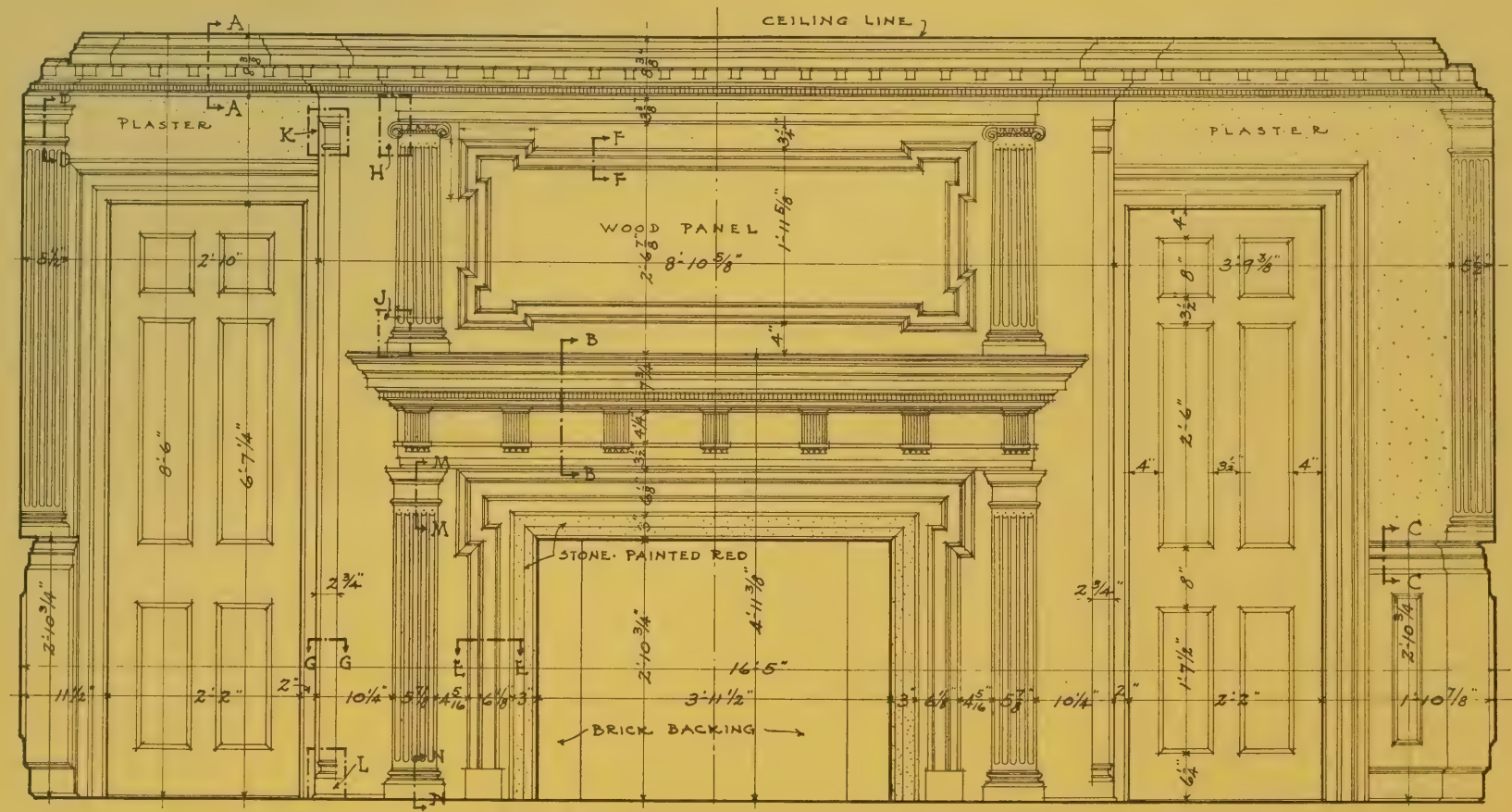


·MANTEL·WALL·WEST·PARLOR·

THE·COWLES·LEWIS·HOUSE

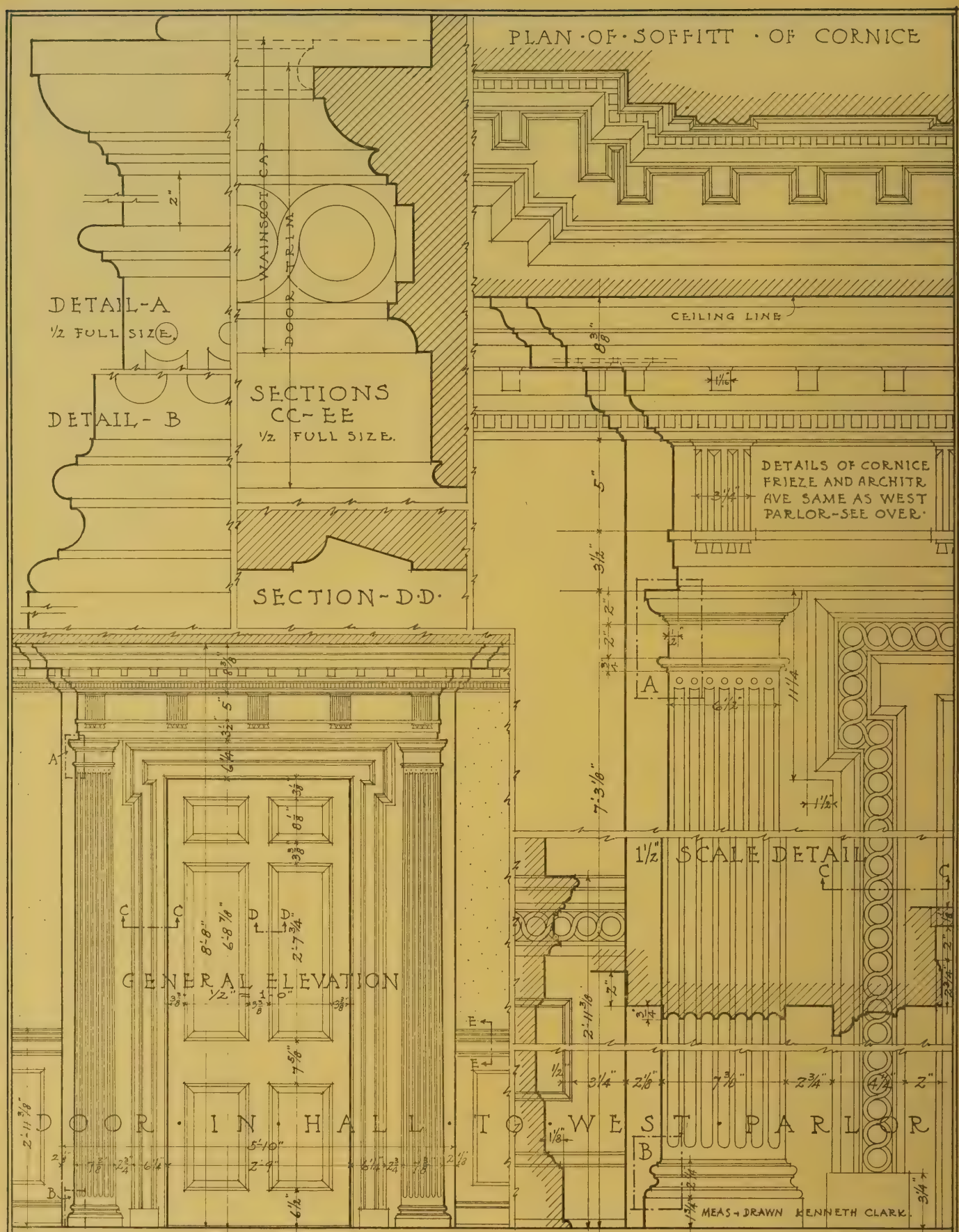
·FARMINGTON·CONNECTICUT·

Drawing reproduced exactly at the scale marked



GENERAL · ELEVATION · OF · MANTEL · WALL ·
SCALE ½" = 1'-0"

ALL MOLDING SECTIONS AND DETAILS · H · J · K · L · ARE SHOWN AT ½ FULL SIZE
OTHER PARTS AT SCALES MARKED ·



These Drawings are reproduced exactly at the scale marked

HALL DOORWAY—THE COWLES-LEWIS HOUSE, FARMINGTON, CONNECTICUT

LOOKING INTO THE DINING ROOM

BEDROOM MANTEL

THE COWLES–LEWIS HOUSE, FARMINGTON, CONNECTICUT

THE ADMIRAL COWLES HOUSE, FARMINGTON, CONNECTICUT

THE PORTER HOUSE, FARMINGTON, CONNECTICUT

SIDE PORCH OF THE GENERAL COWLES HOUSE, FARMINGTON, CONNECTICUT

DOORWAY DETAIL—THE GENERAL COWLES HOUSE, FARMINGTON, CONNECTICUT

Wood Construction Details

Notes for the Specification Writer

Nationally accepted standard trade association lumber terms should be used in an architect's specification, rather than the obsolete or local grade names. This will eliminate much of the confusion now existing between the architect, builder and lumber dealer and will also save the client the possibility of having to pay a "safety premium," necessitated by specifications which are not clearly understood by those who contract to supply the lumber. In the suggestions that follow, offered for the assistance of the specification writer in connection with the wood construction details, shown on the following page, the data is stated in terms which have become standard in the producing districts from which the different species are obtained.

Special attention is called to Insulation: one of the most important of recent developments in the building field

LUMBER: In view of the dangers of green or only partially seasoned lumber getting into a building and to establish the authority for the grade names used in the following specifications, it is suggested that a general clause be included in all specifications where lumber is specified as follows:

> **Specifications-General:** "All lumber for any purpose mentioned in these specifications shall be at least air dry when delivered for use and shall be in accordance with the standard lumber association grading rules of the producing district from which the particular kind of lumber furnished shall come."

SHINGLES: For roof covering of maximum service and lower cost plus the further important advantages of pleasing appearance, no roofing has yet been found to replace the better grades of wood shingle such as are obtainable in all markets today. The White Pine shingles of early days have given way to Western Red Cedar and practically all wood shingles these days are made of this wood. The inherent durability of Western Red Cedar meets the needs fully; the only precautions necessary are to see that the proper grade and thickness of shingles is specified and that they are properly laid with double galvanized or other durable nails.

To cover only the proper specification of the best grade of material the following specification is suggested:

> **Specification:** "Shingles shall be 5 to 2 (5 butts measuring 2 inches) Western Red Cedar, "A" grade and 100% vertical grain as per the new American Lumber Standard Specifications for 16" shingles."

SIDING: For siding two woods suggest themselves, and both are obtainable out of the average lumber dealer's stock in the size indicated in the construction drawing on the following page. Bevel Siding, for instance, is regularly made and stocked by most dealers in 4" and 6" widths (finished to 3½" and 5½") in both Genuine White Pine and Western Red Cedar. Wider siding 8", 10" and 12" wide (finished to 7½", 9½" and 11½" respectively) is called Bungalow Siding but is of exactly the same pattern as the Bevel Siding referred to above and is also available out of stock in either of the woods just mentioned.

The following specification is suggested:

> **Specification:** "Siding shall be 6" standard Bevel Siding, 'B and Better' grade (or "C" grade) Genuine White Pine," *or*
> "Siding shall be 6" Standard Bevel Siding Clear grade (or "A" grade) Western Red Cedar."

OUTSIDE TRIM: For outside trim, including corner boards, casings, cornice lumber, mouldings, turned drops, etc., there is no satisfactory substitute for Genuine White Pine in the better class of building construction. A naturally durable wood, White Pine has the important ability to "stay put" and to hold tight at the joints plus the further advantage of taking and holding paint.

Inasmuch as these items are usually furnished by the millwork house, manufactured from "shop" or "factory grades," no grade specification is recommended beyond that suggested in the following specification:

> **Specification:** "All outside trim, including corner boards, casings, cornice lumber, mouldings, turned drops, etc., shall be cut from Genuine White Pine (Pinus Strobus or Pinus Monticola), free from sapwood and of such grade as to yield practically clear faces on all exposed surfaces."

WINDOW FRAMES & OUTSIDE DOOR FRAMES: For window frames it is peculiarly essential to use a durable wood and White Pine is therefore recommended without substitutes for all exposed parts such as sills, etc. Again, the grade of material from which the frames are to be worked may safely be left to the millwork manufacturer except as provided for as follows:

> **Specification:** "All window frames shall be manufactured from Genuine White Pine of Weyerhaeuser standard either Northern White Pine (Pinus Strobus) or Idaho White Pine (Pinus Monticola), of suitable grade, free from sap and with clear faces wherever exposed, made to sizes and as per detail shown on drawings."

WINDOW SASH: In addition to Genuine White Pine for window sash, another wood is beginning to enter the millwork field from the Pacific Coast, viz: Douglas Fir. A most excellent wood for a great variety of uses and being exceptionally free from sapwood, due to the large sizes of the logs from which it is cut, it is giving a good account of itself and is deserving of more than ordinary consideration. In allowing it in specifications for sash cuttings, care should be taken, however, to insure its being vertical grain as suggested below:

> **Specification:** "Window sash shall be made from clear cuttings of Genuine White Pine (Pinus Strobus or Pinus Monticola), free from sapwood (or shall be made from clear cuttings of Vertical Grain Douglas Fir).

FRAMING OR STRUCTURAL LUMBER: The lumber required for framing or purely structural purposes need not, of course, be clear lumber so long as such technical defects as

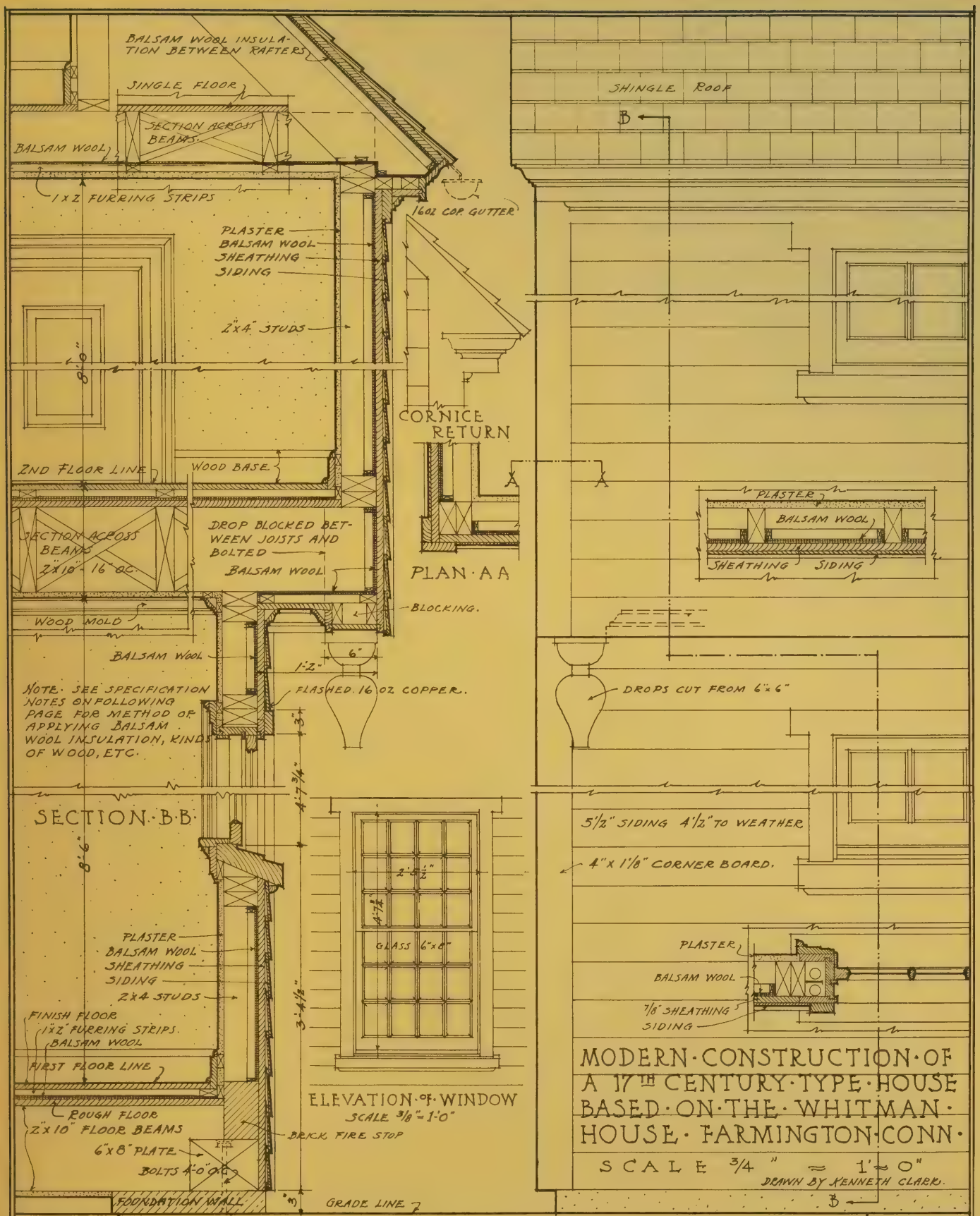
[*Continued on page 24*]

· WOOD · CONSTRUCTION · DETAILS ·

SUGGESTED · BY ·

WEYERHAEUSER · FOREST · PRODUCTS

· SAINT · PAUL · MINNESOTA ·



· WOOD · CONSTRUCTION · DETAILS ·

SUGGESTED · BY ·

WEYERHAEUSER · FOREST · PRODUCTS

· SAINT · PAUL · MINNESOTA ·

Wood Construction Details

[*Continued from page 21*]

it contains do not impair its strength or serviceability for this use. In fact, it would be nothing short of gross extravagance to demand clear lumber for this use. Furthermore, there are several different woods from as many different lumber-producing regions of practically equal structural merit as far as all ordinary house building requirements are concerned. Which one of these woods to choose in any given locality is therefore a question as to which one can be purchased in that locality most economically, a matter determined largely by the distance from the source of production and the consequent freight haul to the market in question. For this reason the specification of Structural lumber should be more or less elastic as is suggested in the following notes:

SILLS: Where solid rather than box sill construction is used, the specification may read as follows: *Specification:* "All sills shall be No. 1 Common grade Douglas Fir (or Pacific Coast Hemlock or Northern Pine or Fir and Larch), square edge and free from sapwood."

STUDDING, PLATES, HEADERS, JOISTS & RAFTERS:

Specification: "*All other structural members, including studding, plates, headers, joists and rafters,* shall be same as above except that sapwood in moderate amount may be permitted."

SHEATHING & ROOF BOARDS: The structural requirements of these items being less rigid than for the structural items listed above, lower grades should be permitted for reasons of economy.

The common grades suggested in the following specification may be run to a Shiplap pattern or dressed and matched (D&M) as preferred.

The choice of species for these uses is even more inclusive than that suggested above for dimension lumber.

Specification: "All sheathing lumber and roof boards shall be No. 3 Common grade (or No. 4 Common grade) Northern Pine (or Pondosa Pine or No. 3 Common Fir and Larch or White Fir or No. 1 Common or No. 2 Common Douglas Fir or Pacific Coast Hemlock 6" (or 8" or 10") D&M (or run to standard ship-lap)."

SUB FLOORS: For sub floors the same specification may be used unless for reasons of economy it may be desired to permit the use of "random widths" and "mixed lengths" square-edged lumber.

ATTIC FLOORS: For flooring the attic or third floor directly over the floor joists a new development by Weyerhaeuser mills permits both a beautiful and attractive floor at very modest cost through the use of 23/8" face standard length Pacific Coast Hemlock Flooring, durable and of as fine quality millwork as the most expensive hardwood flooring. This new flooring has been in use for several years in the West and has recently been made available also in several of the markets of the East. Being without end matching and of lengths ranging from 4 to 20 feet, it can be laid directly over the floor joists.

Specification: "Attic (or third floor) flooring shall be "No. 2 Clear and Better" grade, standard matched, 23/8 inch face Weyerhaeuser Pacific Coast Hemlock Flooring in standard lengths 4—20 feet and vertical grain, for laying directly over the floor joists."

INSULATION: As suggested at the top of page 21 no single item in the construction of the modern house is more essential to comfort, both winter and summer, than a proper job of wall and roof insulation. Nor is there a more important factor in making a house easy and economical to heat. The brand of insulation recommended, namely, Balsam Wool, is a Weyerhaeuser product, made from chemically treated, fire-resistant, sanitary wood fibre made waterproof and windproof between two sheets of tough, asphalt-lined kraft paper. It is a blanket form of insulation; flexible to permit a good, tight job and of greater practical insulating efficiency than any other similar product on the market today.

Specification: Heat insulation shall be standard ½" thick Balsam-Wool, manufactured by the Wood Conversion Company (Weyerhaeuser By-Products Division), Cloquet, Minnesota. Continuity of insulation shall be maintained. Where floors, ceilings or roofs are insulated, as well as outside walls, insulate thoroughly between joists and rafter ends. Throughout, all joints shall be made air-tight, especially at door and window openings. Use full length strips of insulation. End joints, where necessary, shall be butted and covered with lath, nailed through insulation to boarding or header. Insulation strips shall in all cases run in the same direction as studding, joists and rafters. For Frame Outside Wall Insulation: When studs are 16" O. C., insulate with 17" width Balsam-Wool with back of insulation against inside face of sheathing. The flanges or turnouts shall be continuously fastened by means of laths or strips nailed securely through insulation to the studding on the sides and to sills, plates or headers at the top and bottom. Where studding is 24" O. C., use 25" Balsam-Wool. For Roof Insulation, when rafters are 16" O. C., insulate with 17" width Balsam-Wool, applied between the rafters with back of insulation against inside face of roof boarding. Use 25" width Balsam-Wool where rafters are 24" O. C. Floor Insulation: Use 32" width Balsam-Wool, applied over sub-floor, edges butted together over every other joist. Fur over insulation with 1" x 2" furring strips secured over each joist to receive finish floor. Suggested specifications for a complete job of insulation are on file in most architects' offices or may be secured from any of the branch offices of the Wood Conversion Company (Weyerhaeuser By-Products Division), at 1955 University Avenue, Saint Paul; 1849 Straus Building, Chicago; 103 Park Avenue, New York.

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	Des Moines	MONTANA:	Billings	OHIO:	Cleveland	WEST VIRGINIA:	Clarksburg
MASSACHUSETTS:	Boston	NEBRASKA:	Lincoln		Dayton	WISCONSIN:	Madison
	Springfield		Omaha		Toledo		Milwaukee

SPECIES OF WOODS

WHITE PINE	PONDOSA PINE	IDAHO SPRUCE	DOUGLAS FIR
NORWAY PINE	RED FIR AND LARCH	PACIFIC COAST HEMLOCK	WESTERN RED CEDAR

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ROUGH and FINISHED LUMBER
POSTS, POLES and PILING
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Architectural Monographs

Volume XII *Number* 3

The Burlington County COURT HOUSE AT MOUNT HOLLY NEW JERSEY

BY

Fenimore C. Woolman

AN

Architectural Monograph

The Burlington County Court House at Mount Holly, New Jersey

By Fenimore C. Woolman

Being the THIRD *Number of Volume XII and*
THE SIXTY-SEVENTH MONOGRAPH OF

THE WHITE PINE SERIES

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RUSSELL F. WHITEHEAD, Editor

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THE BURLINGTON COUNTY COURT HOUSE, MOUNT HOLLY, NEW JERSEY

The Burlington County Court House *at* Mount Holly, New Jersey

by FENIMORE C. WOOLMAN

INSPIRING history often takes place in buildings of inspiring architecture —or inspiring architecture creates an atmosphere condusive to high and ennobling events, as the reader likes. In either case, probably the most famous early American public buildings are the group surrounding Independence Square in Philadelphia, a group composed, you will remember, of the dignified State House, with its arcades and wings, designed by the great amateur architect, Andrew Hamilton, now known as Independence Hall, and the two buildings that complete the group — the Philadelphia County Court House and the City Hall, erected in 1787. Congress sat in the latter building from 1790 to 1800.

In those early days some knowledge of architecture was considered an essential part of every gentleman's education, for at least two reasons; to round out his general knowledge and as a practical tool when the time to build his own dwelling or to assist in the planning of some public building came. The trained professional architect of today was almost unknown. It is not surprising therefore to find that Major Richard Cox, Zachariah Rossell and Joseph Budd, having been entrusted in 1796 with the building of a new County Court House for Burlington County, New Jersey, should have been able to emulate the creator of the Philadelphia City Hall, its dignity and repose having aroused their admiration, and that they or their appointed craftsmen were successful in catching the spirit of the earlier building and adapting it to their own needs and purposes. The Court House which these amateur New Jersey architects conceived is not as well known to the architectural student of today as is "Congress Hall"—not because they were unsuccessful in their purpose to create a beautiful and well constructed building, but rather because Mount Holly is in a "sand hole" in West Jersey, if we use the geographical term used in the early days, several miles from the old city of Burlington, the first capital of West Jersey, and not on the beaten path of the architectural explorer.

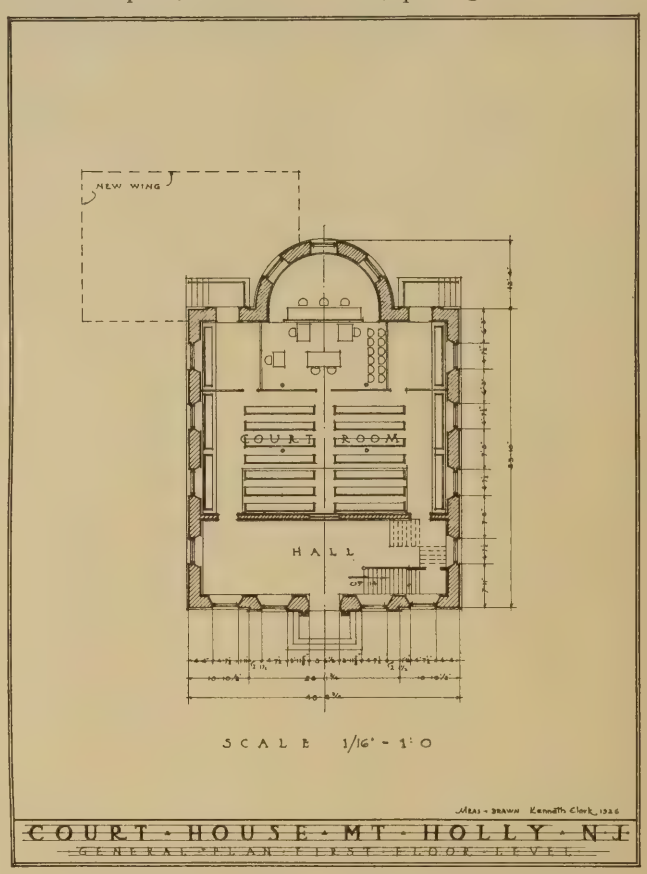
The Court House at Mount Holly, is nevertheless, one of our priceless American architectural inheritances, standing virtually as it was built, an enduring memorial to the most elegant period in early American architectural history. Its very dignity precludes any idea of unseemly conduct or lack of majesty in the administration of the business of meting out Justice—yet it was built only after violent and bitter contention.

According to the records, the original County Court House, which was built in the city of Burlington on the shores of the Delaware River in 1690, was in such a state of delapidation by 1795, that a large expenditure of money was required to repair it, which money the freeholders refused to vote. An act of legislature was passed, enabling the people to erect a new court house, and authorizing a vote of the people of Burlington County to determine where it should be built, as many thought the public buildings should be nearer the center of population than Burlington, which is at one side of the county. The places nominated were Black Horse, Mount Holly and Burlington. Mount Holly won after much excitement and a hotly contested election. Dr. Read, in his "Annals of Mount Holly" says: "I am informed that at the election held at the Mount Holly Market House, to say where the court house should be built, that some voters came from the pine districts with dingy faces, and after voting, retired to the saw mill race, washed themselves, returned and voted again. This may have been true, but for want of proper authentication, we may consider it the product of a romantic imagination and place no reliance upon it." But, such propaganda, evidently rife at the time, had its effect in keeping alive feelings of resentment, however amusing it may be a century and a half later. The citizens of Burlington were so aggravated by the loss of the court house that it would have been unwise, if not actually unsafe for a Mount Hollian to show himself in Burlington. The indignity of being shorn of their pride was never forgiven or forgotten by the old citizens of Burlington, but now time has healed the wound.

The Mount Hollians being victorious, the court

house was erected in 1796 on land purchased in that year from Joseph Powell for 210 pounds. The contracting carpenter for the building was Michael Rush, a native of Mount Holly. Samuel Lewis was a master carpenter and assisted in and superintended the construction. Undoubtedly they were aided in their work by a careful study of the City Hall in Philadelphia and by the early architectural reference books containing measured drawings of Georgian details which appeared in America toward the middle of the eighteenth century.

Like the little building in Philadelphia, the court house is an oblong structure of brick with marble and white wood trim, two stories high, hip roofed and surmounted in the center by a well proportioned octagonal open cupola. On the front a pediment springs from the cornice over a slightly projecting central section of the facade. Unlike the "Congress Hall," in that, instead of a three sided bay breaking the rear wall, it has a semicircular wall to form the end of the court room.



We feel that the "designers" of the Mount Holly building have been more successful in the treatment of the stoop and doorway feature than their brethren in Philadelphia. The simple dignity and scale of the doorway with its graceful fanlight above are in accord with the round headed windows of the lower story. These windows are set effectively in the brick arched openings with marble sills and keystones. Like "Congress Hall," the round topped windows have sliding sash with twelve paned lower sashes and upper sashes with ten small ornamental panes to make up the semicircle above twelve rectangular panes. The upper story windows have twenty-four panes except the one over the entrance, which has thirty panes. They are square headed with flat brick arches and marble keystones.

The brick walls are surmounted by a hand tooled wood cornice, its coved member having a series of recessed arches and the Grecian band or double denticulated moulding beneath. At the second floor level a white marble belt course has been used. The coat-of-arms cut in marble and set in the wall over the front door was a later addition, being the gift of one Isaac Hazalhurt.

In 1807 the Surrogate's office to the north and the Clerk's office to the south of the court house were built, making a most attractive group.

No less interesting than the outward appearance is the aspect of the spacious hall with its beautiful staircase with a half-way landing. As originally planned there was a large folding door in the center of the hall, opening into the court room; on each side of the door there was a gallery with seats one above the other for spectators. In the center of the court was a platform elevated some twelve inches above the aisle and surrounded by a high railing with turned balusters of slender grace. The space was used for the grand and petit jurors. The illustration shows the court room as it is today with a rearrangement of the spectators' seats, railing, desks, jury box, etc.

The climb into the cupola from the upper story disclosed the generous roof timbers obtained in the days when Mount Holly was on the edge of the great forest area known as the Pines or Pine Barrens. The old name "Pine Barrens" implies something like a desert but as a matter of fact, the region produced magnificent forest trees. The original growth, pine in many places, consisted also of lofty oak, hickory, gum, ash, chestnut, etc., interspersed with dogwood, sassafras and holly and in the swamps the valuable cedar.

Like the early houses of West Jersey, the Court House at Mount Holly is of simple, well proportioned architecture of a distinctive type, less luxuriant, massive and exuberant than that across the river in Pennsylvania although both were evidently derived from the Christopher Wren school. The old court house seen today in its setting of ancient and still flourishing button-wood trees, seems to reflect faithfully the simple feeling of the Quaker people.

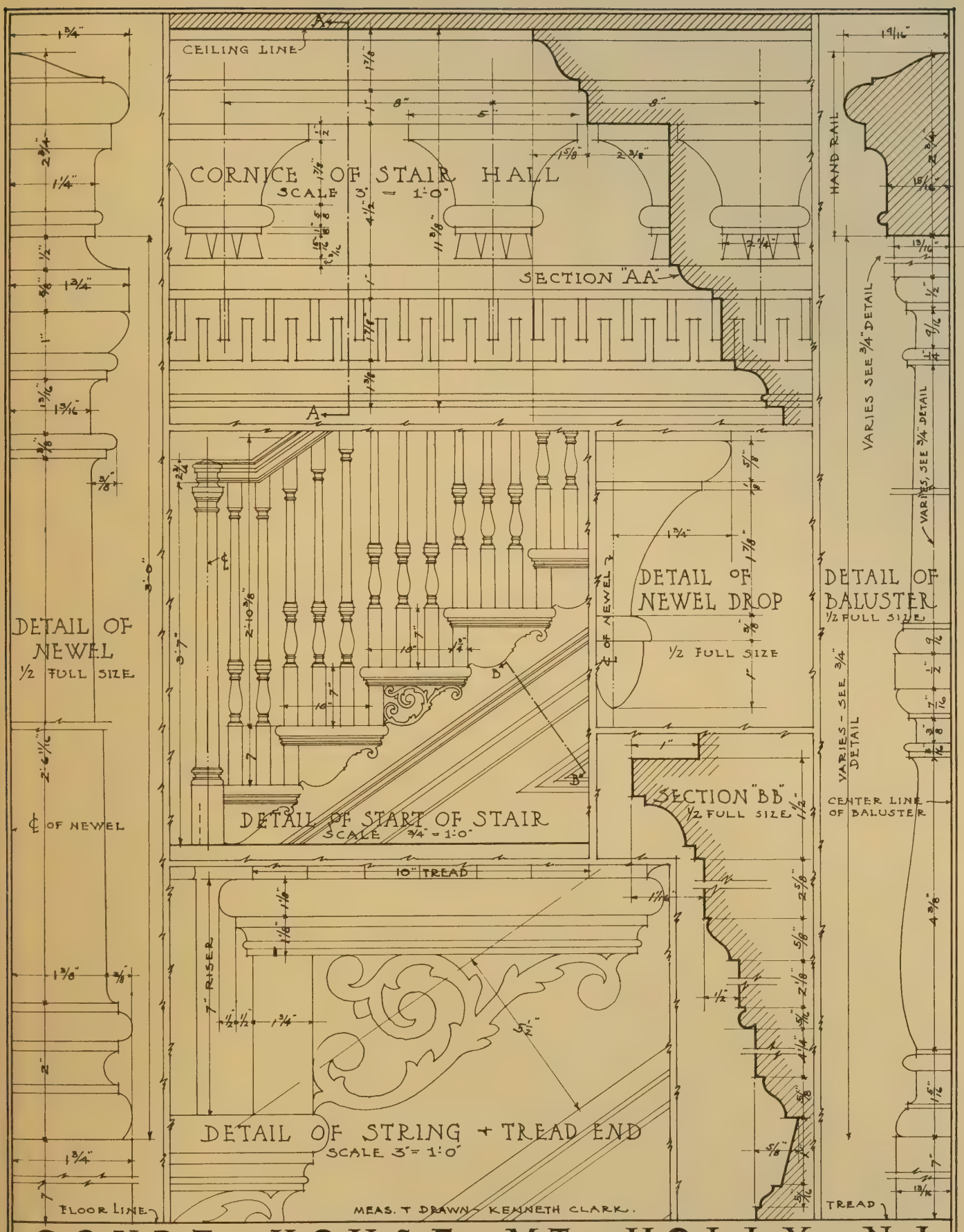
THE BURLINGTON COUNTY COURT HOUSE, MOUNT HOLLY, NEW JERSEY

THE BURLINGTON COUNTY BUILDINGS, MOUNT HOLLY, NEW JERSEY

INTERIOR OF COURT ROOM—BURLINGTON COUNTY COURT HOUSE, MOUNT HOLLY, NEW JERSEY

Detail of Stairway

THE BURLINGTON COUNTY COURT HOUSE, MOUNT HOLLY, NEW JERSEY



COURT · HOUSE · MT · HOLLY · N·J·

·DETAILS · OF · STAIR · HALL·

Rear Entrance and Wall of Court Room

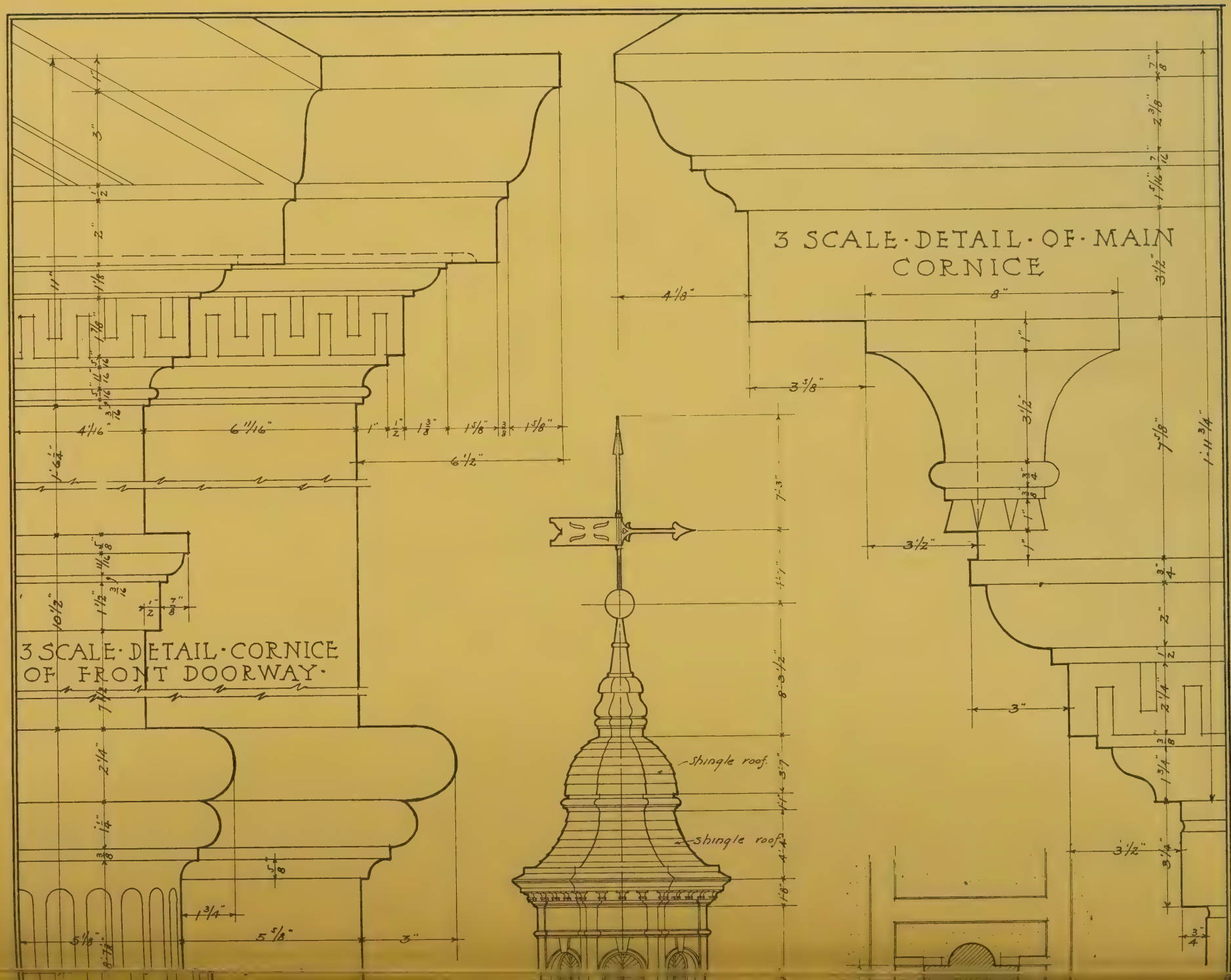
THE BURLINGTON COUNTY COURT HOUSE, MOUNT HOLLY, NEW JERSEY

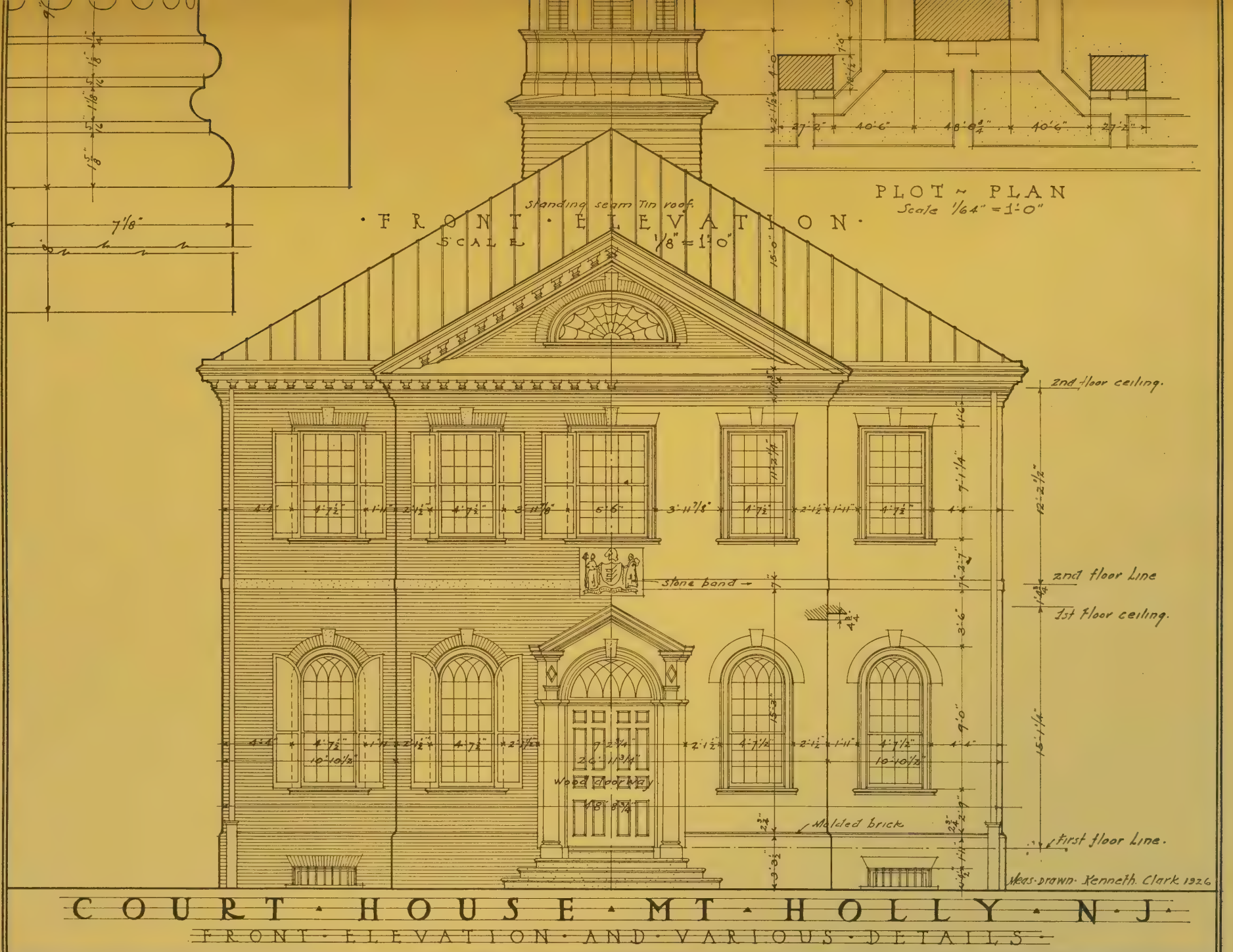
The WHITE PINE SERIES *of*
EARLY AMERICAN DOCUMENTS

With MEASURED DRAWINGS *from*
The George F. Lindsay Collection

The Burlington County
COURT HOUSE *at* MOUNT HOLLY, N. J.

DIRECT VIEW OF FRONT ELEVATION


3 SCALE · DETAIL · OF · MAIN CORNICE
3 SCALE · DETAIL · CORNICE OF FRONT DOORWAY ·
Shingle roof.
Shingle roof.


PLOT ~ PLAN
Scale 1/64" = 1'-0"
· F R O N T · E L E V A T I O N ·
SCALE 1/8" = 1'-0"
Standing seam Tin roof.
2nd floor ceiling.
2nd floor Line
1st floor ceiling.
stone band
Molded brick
First floor Line.
Wood door way
Meas. drawn. Kenneth. Clark 1926
C O U R T · H O U S E · M T · H O L L Y · N · J ·
F R O N T · E L E V A T I O N · A N D · V A R I O U S · D E T A I L S ·

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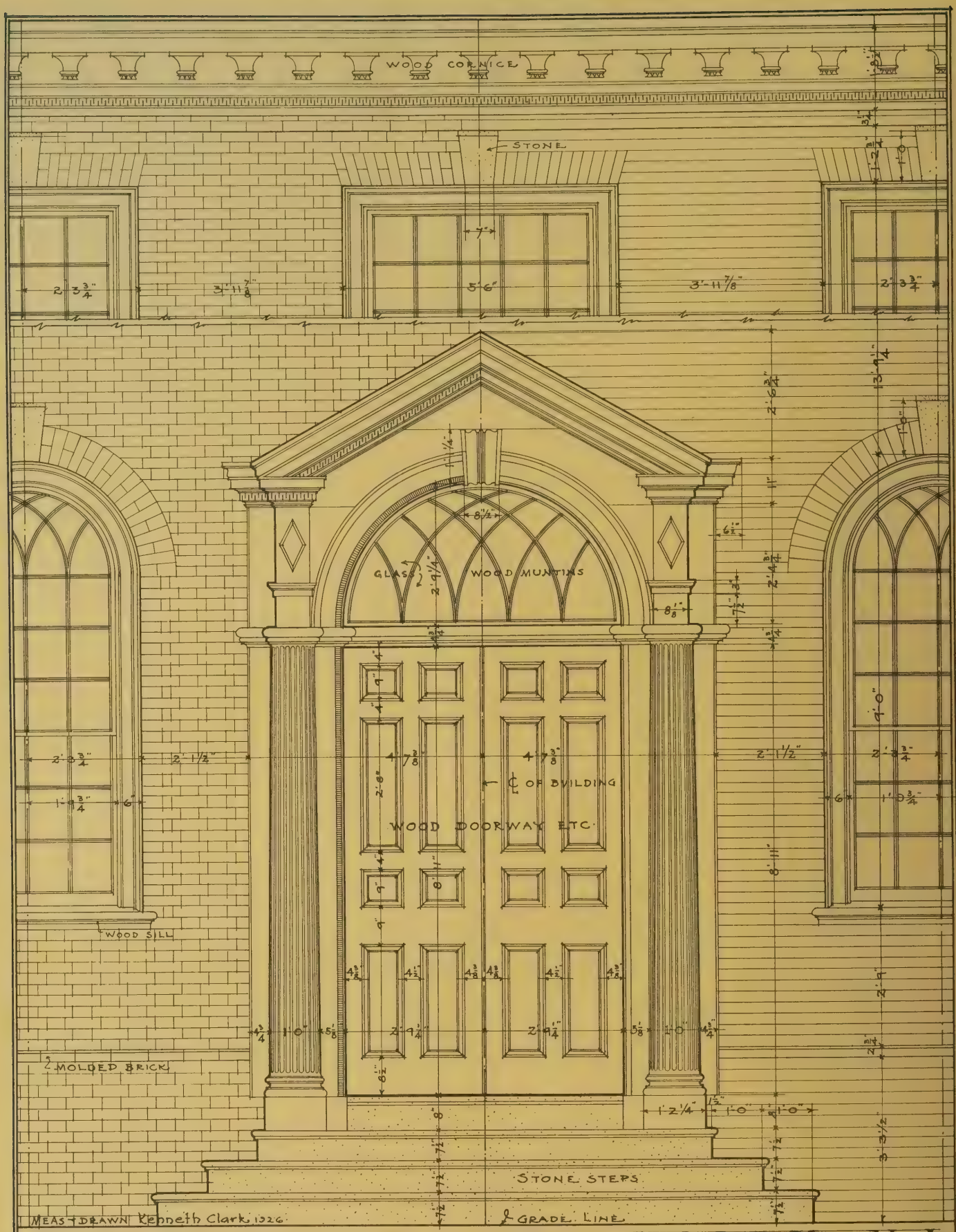

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Detail of Front Elevation

THE BURLINGTON COUNTY COURT HOUSE, MOUNT HOLLY, NEW JERSEY

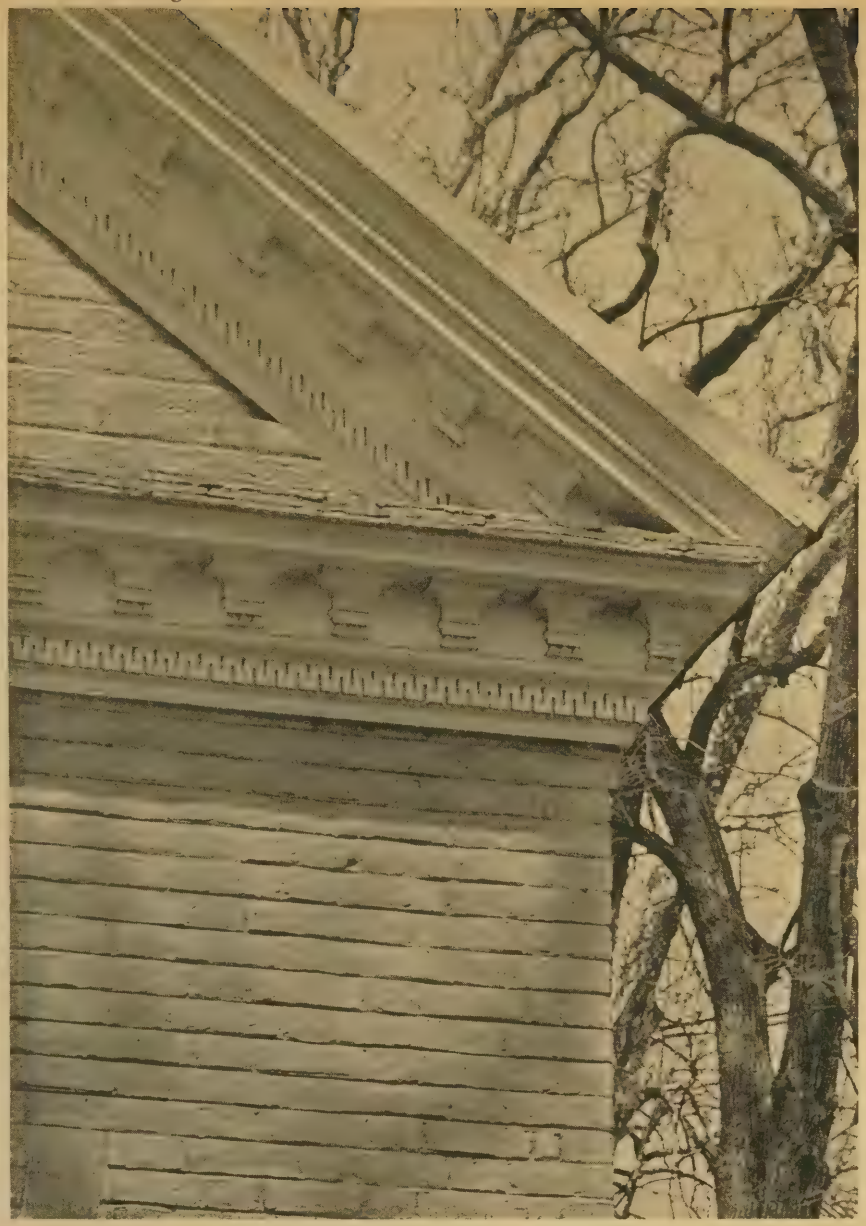
Detail of Front Entrance Doorway

THE BURLINGTON COUNTY COURT HOUSE, MOUNT HOLLY, NEW JERSEY

Detail of Rear Entrance Doorway

THE BURLINGTON COUNTY COURT HOUSE, MOUNT HOLLY, NEW JERSEY

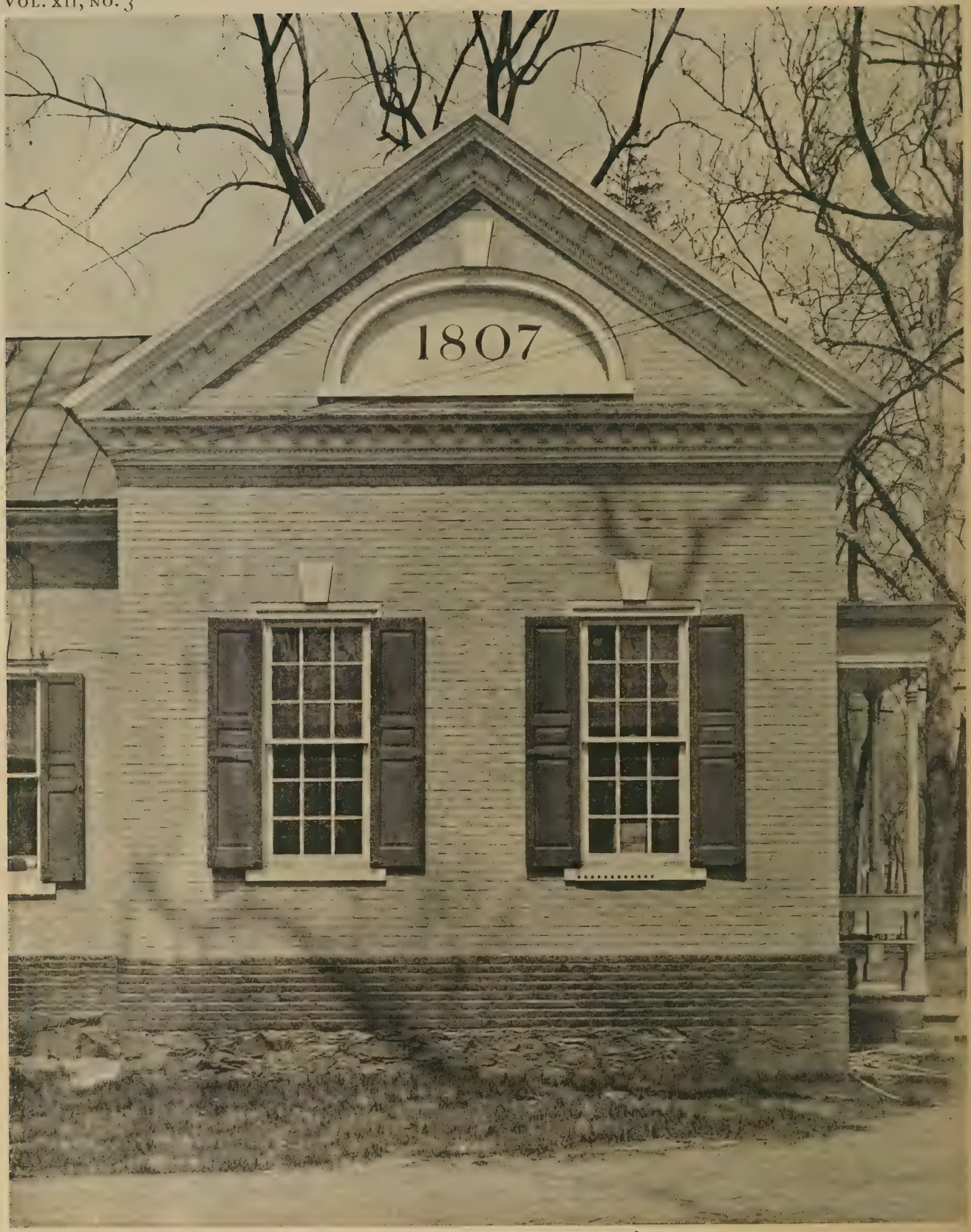
DETAIL OF MAIN CORNICE—THE BURLINGTON COUNTY COURT HOUSE, MOUNT HOLLY, NEW JERSEY



CORNICE DETAIL—COLLECTOR'S OFFICE

WINDOW DETAIL—COURT HOUSE

THE BURLINGTON COUNTY BUILDINGS, MOUNT HOLLY, NEW JERSEY



DETAIL OF END ELEVATION—COLLECTOR'S OFFICE

THE BURLINGTON COUNTY BUILDINGS—MOUNT HOLLY, NEW JERSEY

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JUNE, 1926

THE SESQUICENTENNIAL

PHILADELPHIA, the seat of early American nationalism, on May 31st, opened the gate of her Sesquicentennial Exposition. Not many persons now living saw the Centennial Exposition of 1879 held on the Fairmount Park site, which eclipsed everything of the sort attempted up to that time in this country—to be eclipsed in turn by the Chicago Exposition of 1893 commemorating the 400th anniversary of the discovery of America.

The present exposition is perhaps less national and international in scope than the one of fifty years ago, but the 1926 exposition deserves and will have the support of all Americans interested in our past and our future. To those who visit the exposition and the scenes of our birth and infancy as a nation, it means a quickening of patriotism and of the historical imagination to establish personal contact with Independence Hall, to walk through Independence Square and to recreate the outward aspect of Philadelphia of 1776.

Philadelphia has preserved her ancient historic association as few other American cities have. She is still a real shrine for the patriotic and architectural pilgrim.

THE AMERICAN RENAISSANCE

THE tremendous strides that have been made in the last few years in our appreciation of Early American Architecture are not due to any new discoveries in that field, but to an awakening on the part of our architects and of the general public to the true value of this country's early work. This same historic architectural background has been known of and studied for many years, but general interest was lacking and except for a few of the better known towns, such as Salem, Philadelphia, Marblehead, etc., the great majority of early American towns have been neglected by the recorders and their praises unsung.

The so called "Colonial" house of the 1880-90 period could not be classed as a modern translation of the heritage our forefathers left us. The architect of that time had scant knowledge of the true basis on which his design was supposed to rest. All sorts of foreign motives were falsely introduced. The real significance and simplicity of the early work were clouded in a mass of swags, badly scaled detail and showy elements which went to make up a whole that was as far from the ideal of the early builder as it was possible to get with the use of the same basic materials for execution.

The "Colonial" of that awful period had a set formula of columns, pediments, eggs and darts and dentils that were thrown together on the drafting board and which resulted in the atrocities that disfigured so many suburban communities.

The last few years, however, have seen the beginning of a real American Renaissance. Study and investigation have shown that the early American types have an infinite variety of interest ranging from the sophisticated "mansion" of the larger early cities to the unpretentious farmhouse; from the house which is a beautiful and chaste example of the best of the Georgian period with detail masterly in execution to the farm "parlor" simple, with hardly a molding and yet bearing the unmistakable signs of refinement and taste requiring no ornament to exemplify them. Through the entire gamut runs the stream of reason, simplicity and appropriateness that is the hall-mark of all good native art.

Our ancestors built their homes and their public buildings honestly and efficiently; this is proved by their endurance which has carried them through the years intact, except for the vandal hands of the "restorer" and "improver." That their sense of the beautiful was the rule and not the exception is attested by the predominance of so many remarkable examples of architectural design in the old work that survives.

We have heard it stated that much of the beauty of the old work was accidental and simply the result of building for a practical result, and thus, by simplicity attaining a purity of line, a spacing of parts that gave them their undeniable charm. Many of the smaller and simpler buildings owed much to this practice, but such examples as the Read house at New Castle, Delaware, the Admiral Cowles house at Farmington, Connecticut, to mention only two of many of equal merit, all of a more sophisticated mold, are undoubtedly the result of work by minds and hands educated in the subtleties of true architectural design. Their beauty was premeditated and foreseen, perhaps before a stick of timber was cut. The trained architect knows that good architecture does not just happen; the creation of its beauties is too intricate for that, and depends on too many elements that have to be welded into a pleasing composition. Every great design is created from the solid foundation of knowledge on the part of its designer.

That our early architects and builders were men of education whose ability was due to a real understanding of their arts is beyond question and from them, through the study of their work, our modern world can learn much of design, of thoroughness and of the creation of beautiful buildings that will live to give pleasure in the years to come.

THE MANUFACTURER'S TRADE MARK

THE personal signature of an individual upon a commercial writing, validates that writing—stands for the responsibility of the signatory—binds him to the terms of the writing. The trade mark of a manufacturer upon his product carries with it all the force of his personal signature. By the trade mark upon his product the manufacturer binds himself to maintain the known and accepted standard of quality and to deliver it in his trade marked goods.

Moral standards are as high among manufacturers as among professional men. There is every reason for architects to give their confidence to trade marked lumber, as compared with products not bearing the personal guarantee of the manufacturer.

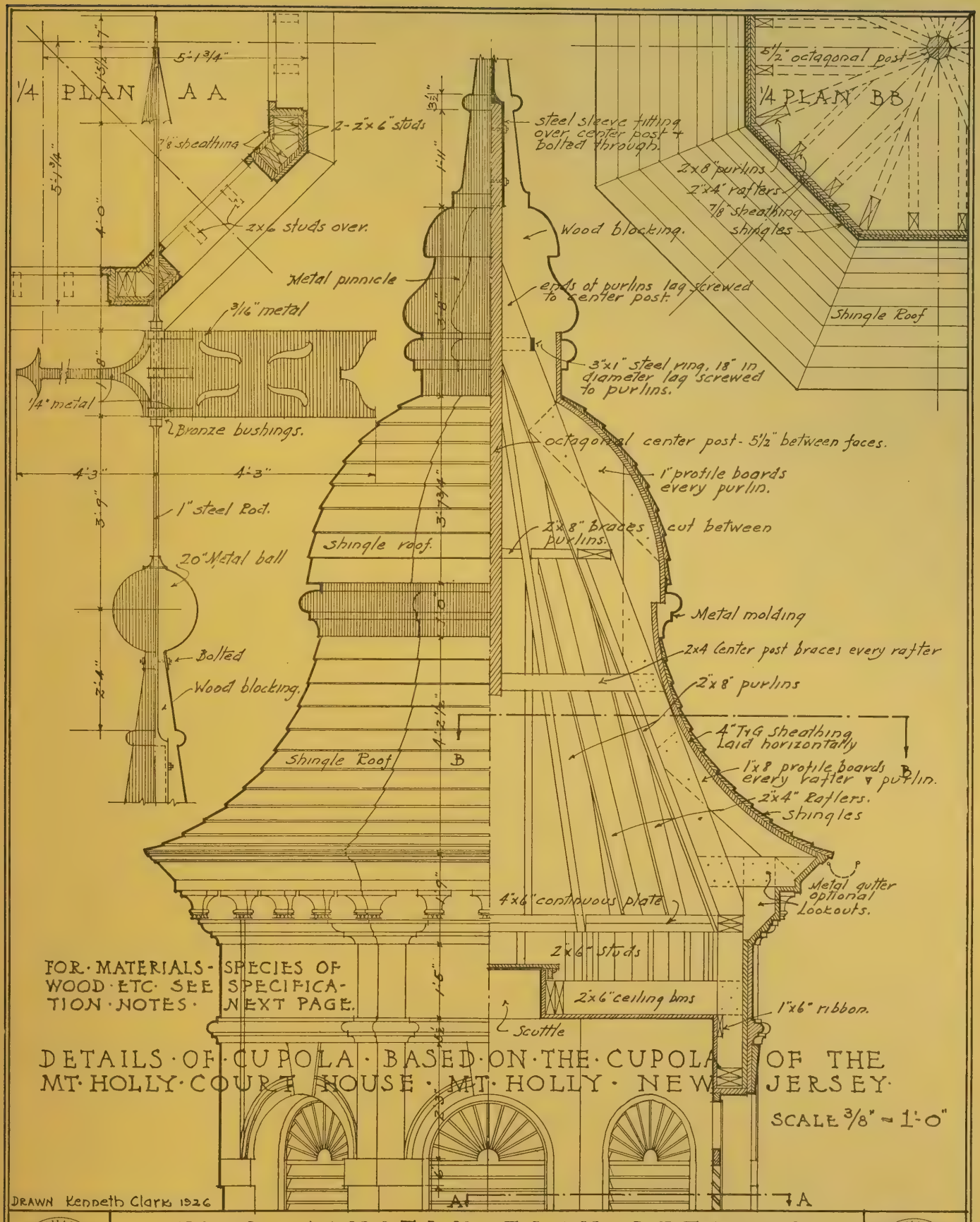
On page 24 of this issue attention is called to the advantage of specifying lumber by nationally accepted standard trade association lumber nomenclature, backed by the guarantee of the manufacturers' specie and trade mark.

·WOOD·CONSTRUCTION·DETAILS·

·SUGGESTED·BY·

WEYERHAEUSER·FOREST·PRODUCTS

·SAINT·PAUL·MINNESOTA·



FOR MATERIALS - SPECIES OF WOOD ETC SEE SPECIFICATION NOTES NEXT PAGE.

DETAILS OF CUPOLA BASED ON THE CUPOLA OF THE MT HOLLY COURT HOUSE MT HOLLY NEW JERSEY.

SCALE 3/8" = 1'-0"

DRAWN Kenneth Clark 1926

WOOD CONSTRUCTION DETAILS
SUGGESTED BY
WEYERHAEUSER FOREST PRODUCTS
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Wood Construction Details

Notes for the Specification Writer

Nationally accepted standard trade association lumber terms should be used in an architect's specification, rather than the obsolete or local grade names. This will eliminate much of the confusion now existing between the architect, builder and lumber dealer and will also save the client the possibility of having to pay a "safety premium", necessitated by specifications which are not clearly understood by those who contract to supply the lumber. In the suggestions that follow, offered for the assistance of the specification writer in connection with the wood construction details, shown on the preceding page, the data is stated in terms which have become standard in the producing districts from which the different species are obtained.

LUMBER: It not infrequently happens that the service value of an otherwise excellent piece of construction work is seriously damaged by the shrinkage of green lumber or by the use of a species unsuited to the work at hand. To provide against the delivery of green or only partially seasoned lumber and to assure the delivery of the species ordered it is suggested, therefore, that the following general clause be included in all specifications where lumber is specified:

> **Specifications-General:** "All lumber for any purpose mentioned in these specifications shall be at least air dry when delivered for use and shall conform to the standard lumber association nomenclature and grading rules of the producing district from which the particular kind of lumber furnished shall come".

FRAMING OR STRUCTURAL LUMBER: The principal lumber producing sections of the country produce a number of woods, all of which have sufficient strength and stiffness for the structural items in ordinary building construction. Specifications for structural items should, therefore, be sufficiently flexible to permit the selection of that wood which can be purchased most economically in a given locality, a matter determined principally by the distance from the producing region and consequent freight haul.

Nor should clear lumber be insisted upon in the species selected. There are many defects which do not impair the strength or serviceability of lumber for structural purposes and to insist upon a grade better than that necessary to meet the requirements would be extravagant and wasteful.

The following specification is suggested.

CENTER POST, PLATES, BEAMS, RAFTERS, PURLINS, STUDDING AND BRACING:

> **Specifications:** "All structural members, including center post, plates, ceiling beams, rafters, purlins, studding and bracing, shall be No. 1 Common grade Douglas Fir (or Pacific Coast Hemlock) or (NorthernPine) or (Fir-and-Larch)".

SHEATHING OR ROOF BOARDS: The structural requirements for this item being less rigid than for the structural members, a lower grade and a wider range of species should be permitted for reasons of economy.

> **Specification:** "Sheathing or roof boards shall be No. 3 Common grade Northern Pine or (Pondosa Pine) or (Fir-and-Larch) or (White Fir) or (No. 1 Common Douglas Fir) or (Pacific Coast Hemlock), 4" wide and dressed and matched (D&M)".

OUTSIDE TRIM: The two most important requirements for an exterior finish wood, durability when exposed to the weather and ease of working under the carpenter's and wood carver's tools, are found to a higher degree in *Genuine* White Pine than in any other wood. This natural durability and soft, even texture, plus a remarkable ability to stay in place, maintain a tight joint and take and hold paint, have made *Genuine* White Pine the preferred wood for outside trim in the better class of construction.

Since other woods are not infrequently sold as Genuine White Pine it is suggested that the phrase "Weyerhaeuser standard of manufacture" be inserted in the specification as a means of protection for the buyer. Weyerhaeuser mills are now stamping each piece in the better grades of *Genuine* White Pine with a species mark "Genuine White Pine" in addition to the manufacturer's trademark.

> **Specifications:** "All lumber used for exterior trim (including cornice, carved and moulded work, window frames, siding, doorway and door, panels, cupola, shutters, louvres, etc.,) shall be cut from Genine White Pine (Pinus Strobus or Pinus Monticola) of the Weyerhaeuser standard of manufacture, free from sapwood and of such grade as to yield practically clear faces on all exposed surfaces".

SHINGLES: Western Red Cedar holds the same position for roofing purposes that White Pine does for outside trim. In fact, Western Red Cedar is so eminently fitted for a shingle wood that practically all shingles today are cut from this species. The only precautions necessary are to see that the proper grade and thickness of shingles are specified and that they are properly laid with double galvanized or othe durable nails.

> **Specifications:** "Shingles shall be 5 to 2 (5 butts measuring 2 inches) Western Red Cedar, "A" grade and 100% vertical grain as per the new American Lumber Standard Specifications for 16" shingles".

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	Springfield		Omaha		Toledo		Milwaukee

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The

WHITE PINE

SERIES OF

Architectural Monographs

Volume XII *Number* 4

ALEXANDRIA
VIRGINIA

BY

Henry H. Saylor

AN

Architectural Monograph

ALEXANDRIA VIRGINIA

BY

Henry H. Saylor

Being the FOURTH *Number of Volume XII and*
THE SIXTY-EIGHTH MONOGRAPH OF

THE WHITE PINE SERIES

Intimate treatiſes of the ARCHITECTURE of the *American Colonies* and of the *Early Republic* preſented with well ordered completeneſs, to further a broader underſtanding and to create a permanent Record of *Early American* ARCHITECTURE.

RUSSELL F. WHITEHEAD, Editor

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NEW YORK

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ENTRANCE DETAIL—THE FAIRFAX HOUSE, ALEXANDRIA, VIRGINIA

Alexandria, Virginia

by Henry H. Saylor

ALEXANDRIA, like several other early settlements in America, might have been, but for a whim of Fate, one of the great ports of the Atlantic seaboard. The tide of immigration to the new continent touched the cove that nestled here under the Potomac's high banks, eddied about it for a time, and then swept on to make a Baltimore.

In July, 1608, Captain John Smith and fourteen companions imbued with some of his own intrepid spirit of exploration, sailed up the Potomac River and were the first white men to look upon the site of what was to become Alexandria. They saw merely a small encampment of Doeg Indians, a tribe of the Algonquins, who were friendly and hospitable.

By 1631 there had gathered in the neighborhood a few settlers, who built a tobacco storehouse and called the hamlet Belle Haven. In 1669 Robert Howison obtained a patent for land upon which the little cove settlement was situated, but instead of taking it up, sold the patent to John Alexander, a Stafford planter, for the consideration of 6000 lbs. of tobacco. Not until 1695 was there a settlement upon the grant under the patent, when Thomas Pearson sailed up the river and located upon Pearson's Island, and it was over half a century later, in 1749, that William Ramsay, John Carlyle and associates founded Alexandria.

On March 9, 1780, a government was set up, Alexandria being then over thirty years old. The town spread itself upon a high plateau, extending from Oronoco Creek and its marsh on the north and northwest, to the river shore on the east, and to what was known as the White Oak Swamp on the southwest and south.

It was a town marked by deep loyalty to the Crown, if we may judge by the names given its streets. Royal and Fairfax were the two long streets, crossed by Cameron, King, Queen, Prince, Princess, Duke and Duchess. These shorter cross streets, cutting through to reach the cove below, rounded off the sharp edge of the bluff which had long formed the line of demarcation between the cove and the high plateau. Later on, when loyalty to the King gave place to national self-consciousness, the streets reflected no less definitely the heroes of the new republic, in Wolfe, Wilkes, Pitt, St. Asaph and Patrick Henry, for whom a double measure of pride was expressed in the naming of two streets.

Tobacco was the chief product of the surrounding countryside, and there is probably not an acre within the town limits that has not produced its hundredweight of good Oronoco. With a good harbor and the ability to produce something that the outside world wanted, Alexandria grew rapidly as a trading port for foreign commerce.

Then came the event that proved to be the turning point in the town's march of progress. In August, 1814, two British frigates sailed up the river and took the town. Fort Warburton, designed to protect the community from such an attack, had just been depleted by a withdrawal of troops, and the officer in charge, feeling that resistance would be futile, blew up his arsenal and abandoned the fort. The invaders looted the town, carrying off quantities of tobacco and grains stored in the port warehouses, and Alexandria's commercial activities suffered a blow from which they never fully recovered. Meanwhile, her rival port, Baltimore, forged ahead, and Alexandria's promised greatness became merely something that might have been. To complete the wreck of great hopes, a fire swept the town in 1827, burning fifty-three houses.

Alexandria's loss, however, is perhaps the gain of architectural students and antiquarians today, for in the little town the march of progress has not swept aside so much of the simple, lovingly detailed work of the late eighteenth century and the early years of the nineteenth as in other places where the work of these years has so largely been destroyed in the making of what were fondly thought to be improvements.

Most widely known among the buildings that still remain, wholly or in part, are three that have unusual significance, not only architecturally but as settings for historical events in the early days of the republic. These are Christ Church, the Carlyle House and Gadsby's Tavern. No student of the early architecture of America thinks of Alexandria, Virginia, apart from these three great landmarks; they *are* Alexandria, but, as some of the photographs reproduced in this monograph show, there are other bits that should not be lost to architectural history—a cornice here, an entrance doorway there, a naive bit of wood construction. It is with this thought in mind that the present selection of

material is brought together, stressing less the better known work, which has appeared from time to time elsewhere, than some minor details that might otherwise be overlooked and soon pass into oblivion.

Nevertheless, the background of all this work, the flavor of Alexandria, can best be conveyed as relating to her three great landmarks. They, of course, rather than any minor building or unrelated detail, bring to a focus those faraway days on the Potomac—their intensity, the resolute single-mindedness of the men who made them epochal, the innate dignity and taste of their unsophistication, the craftsmanship that so evidently found real joy in itself.

Christ Church, Alexandria, scarcely less than Pohick Church itself, bears an aura of close association with George Washington. He was a vestryman of both churches—his father, Augustine Washington, had been a vestryman of Truro Parish before him—and when Christ Church was opened for worship, purchased his pew for the sum of £26:10:8. Tradition has it that both he and Thomas Jefferson had a hand in the design of Christ Church, though it seems more likely that the building was chiefly the work of James Wren, said to have been a descendent of Sir Christopher.

The church was started about 1765, the contract for its erection being awarded to James Parsons for £600. But, like many of the early churches, it was long in the building, being finished only in 1773 after Parsons had given up the task and Col. John Carlyle had undertaken, in 1772, to complete it for the additional sum of £220. On February 27, 1773, it was finally completed in its original form and dedicated. The gallery was added about 1800 and the tower somewhat later. In design, Christ Church bears a strong resemblance to the later and perhaps better known Pohick Church, differing chiefly in the tower that was added later and a pedimented Palladian window at the opposite end. This similarity of design is not surprising, considering the fact that George Washington himself made the drawings for Pohick Church, and, being a vestryman of Christ Church at the time, had access to Wren's drawings for the earlier building.

It was on the green in front of Christ Church that George Washington, talking earnestly with a few of his friends and neighbors of the tea thrown overboard in Boston Harbor, definitely committed himself to the policy of resistance—and the birth of a new nation became imminent.

A hundred years later, upon the same church green, on a Sabbath morning in May, a retired soldier stood talking with his friends and neighbors. Besought by all, Robert E. Lee here tacitly accepted the command of the Armies of the Commonwealth.

The Carlyle House, second of Alexandria's hallowed landmarks, lately a part of the Braddock Hotel on Fairfax Street, was built by John Carlyle in 1745, upon the foundations of what had been an old stone fort, erected possibly as early as 1638. Carlyle was a prosperous merchant, as may be surmised from the fact that he built this mansion when but twenty-five years old.

Colonel John Carlyle, a close friend of George Washington's, who had married one of the Fairfax family, made his home a center of the social and political life of the day. Here we find gathered such figures in the nation's history as Thomas Jefferson, Aaron Burr, John Marshall, Charles Carroll, John Paul Jones, and James Rumsey, inventor of the first steamboat.

Gadsby's Tavern, third of the architectural monuments by which Alexandria is known, was one of the great stopping places between north and south in the days when stage coaches rumbled over the King's Highway. Originally called Claggett's Tavern, it was built by John Wise in 1792, and few travelers from Williamsburg, Richmond and the south passed by it on their way to Philadelphia without partaking of its widely famous hospitality. Here in the great ballroom, which is now forever preserved against disintegration in the American Wing of the Metropolitan Museum of Art, were held the famous Birthnight Balls, in honor of the King and Queen. And here, growing out of that early custom, was instituted in 1798 the first public celebration of Washington's Birthday, with the beloved General himself present.

Lafayette was an honored guest at Gadsby's in 1824—his second visit to Alexandria, for in 1777 he passed through the town on his way to join Washington's army.

Today Alexandria, like Williamsburg, turns her thoughts back to the great days of old. What can a mere future offer to the town which was George Washington's post-office, his place of voting? Here he had his surveyor's office, here brought for sale the produce of his farms. It was here he came to attend Masonic Lodge. Into Alexandria's streets often rolled the coach from Mount Vernon, bringing the family to some social gathering at Colonel Carlyle's or to a dance at Gadsby's Tavern. Here dwelt Dr. Laurie, who attended all Washington's people by contract at £15 the year; Dr. Craik and Dr. Elisha Dick, both of whom attended the General in his last illness. It was from Alexandria that Washington as the young surveyor had set out upon his Western expeditions, and, later, to fight in the wars with the French. He represented the town in the House of Burgesses, surveyed its streets, was a member of its Town Council, and here, on the steps of Gadsby's, the General held his last military review.

Alexandria looks backward, proud of her glorious past, and we, standing afar off, would share her pride, for what was hers is now the heritage of all of us.

CHRIST CHURCH, ALEXANDRIA, VIRGINIA

THE LEE AND BURSON HOUSES—ORONOCO STREET—ALEXANDRIA, VIRGINIA

HOUSE AT NUMBER 711 PRINCE STREET, ALEXANDRIA, VIRGINIA

ENTRANCE DETAIL—HOUSE AT NO. 711 PRINCE STREET, ALEXANDRIA, VIRGINIA

THE FAIRFAX HOUSE—CAMERON STREET, ALEXANDRIA, VIRGINIA

ENTRANCE DETAIL—OLD CITY TAVERN, ALEXANDRIA, VIRGINIA

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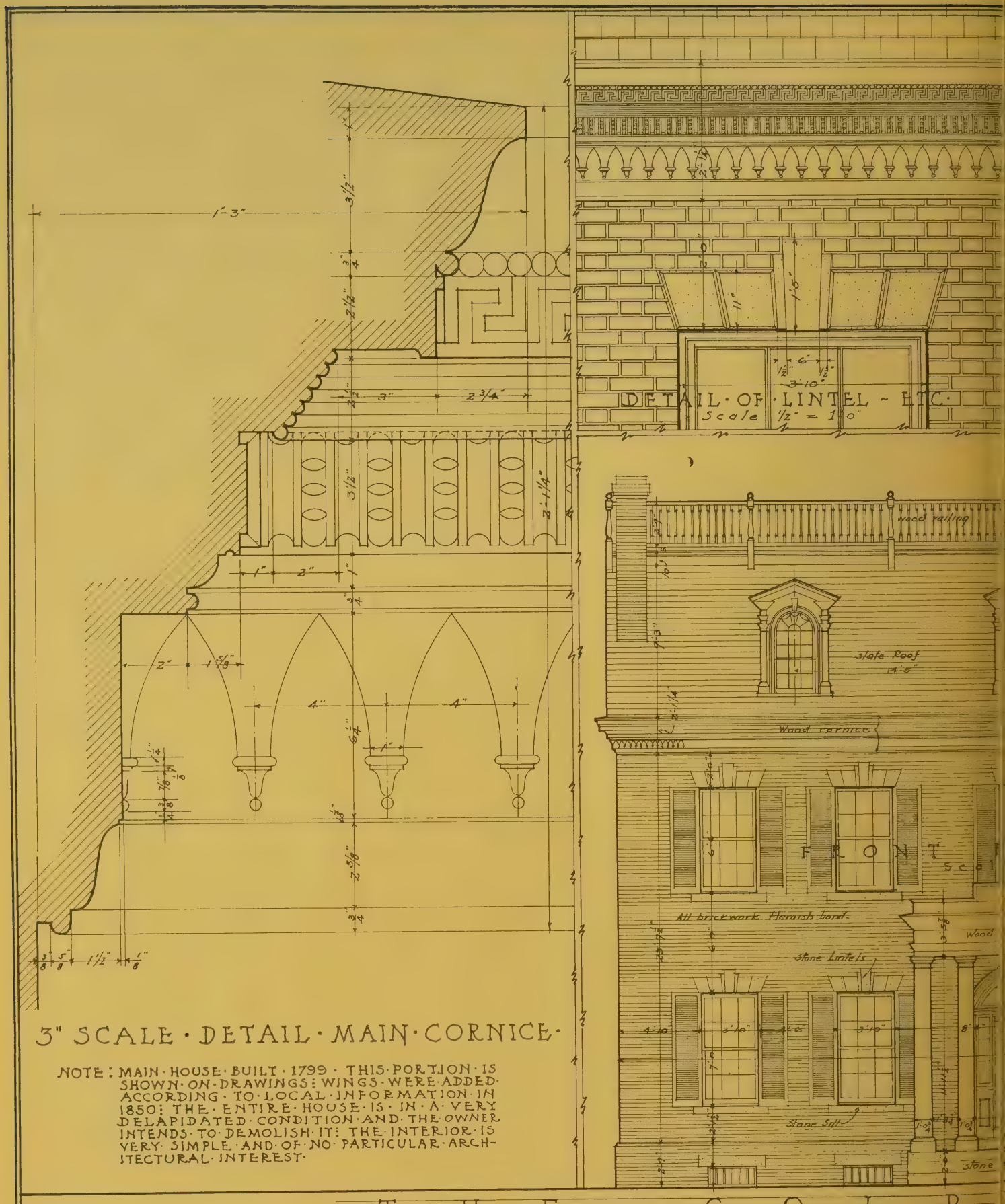
The COLROSS HOUSE
ALEXANDRIA, VIRGINIA

CENTRAL PORTION OF FRONT ELEVATION



3" SCALE · DETAIL · MAIN · CORNICE ·

NOTE: MAIN · HOUSE · BUILT · 1799 · THIS · PORTION · IS SHOWN · ON · DRAWINGS; WINGS · WERE · ADDED · ACCORDING · TO · LOCAL · INFORMATION · IN 1850; THE · ENTIRE · HOUSE · IS · IN · A · VERY DELAPIDATED · CONDITION · AND · THE · OWNER INTENDS · TO · DEMOLISH · IT; THE · INTERIOR · IS VERY · SIMPLE · AND · OF · NO · PARTICULAR · ARCHITECTURAL · INTEREST.

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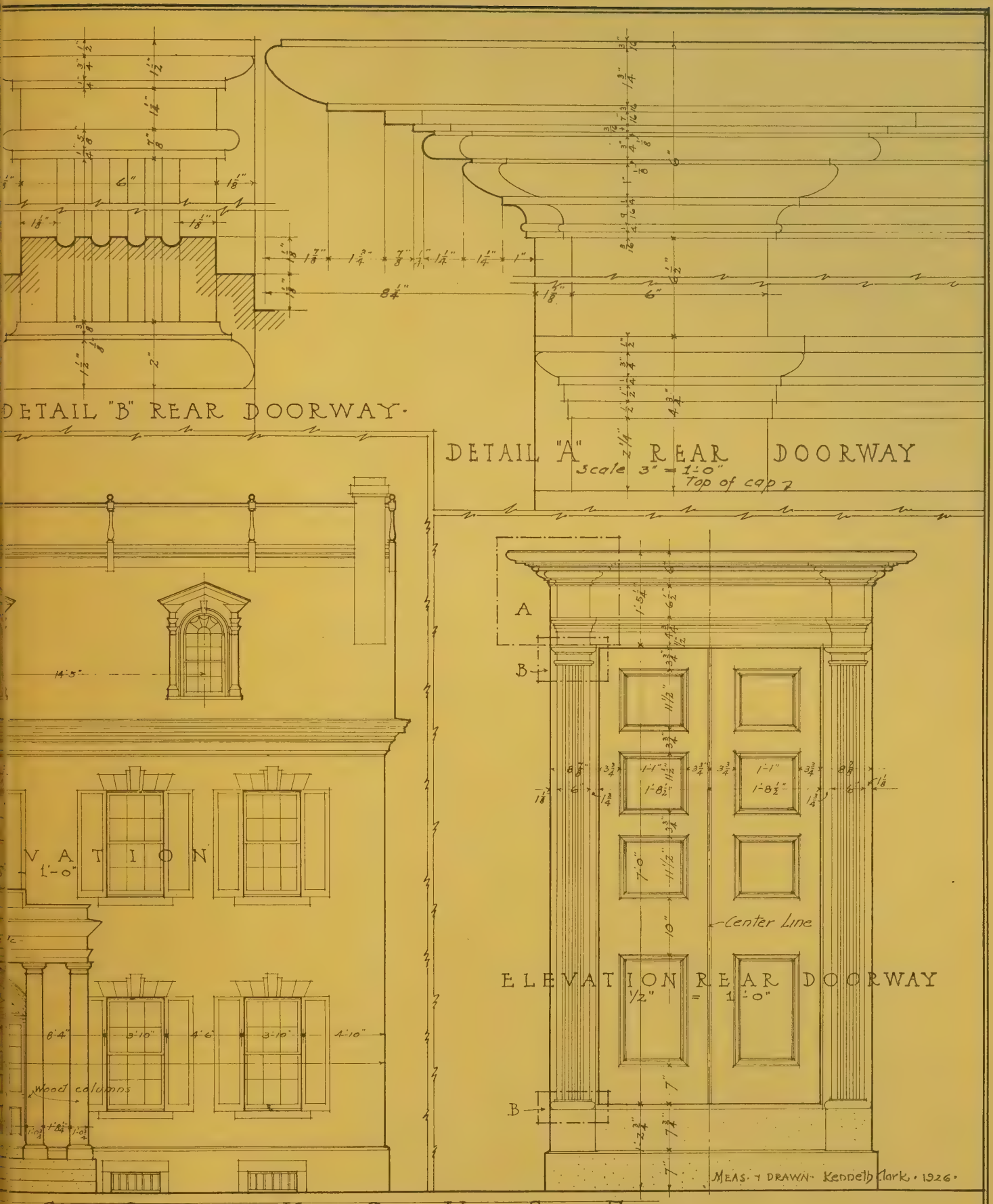

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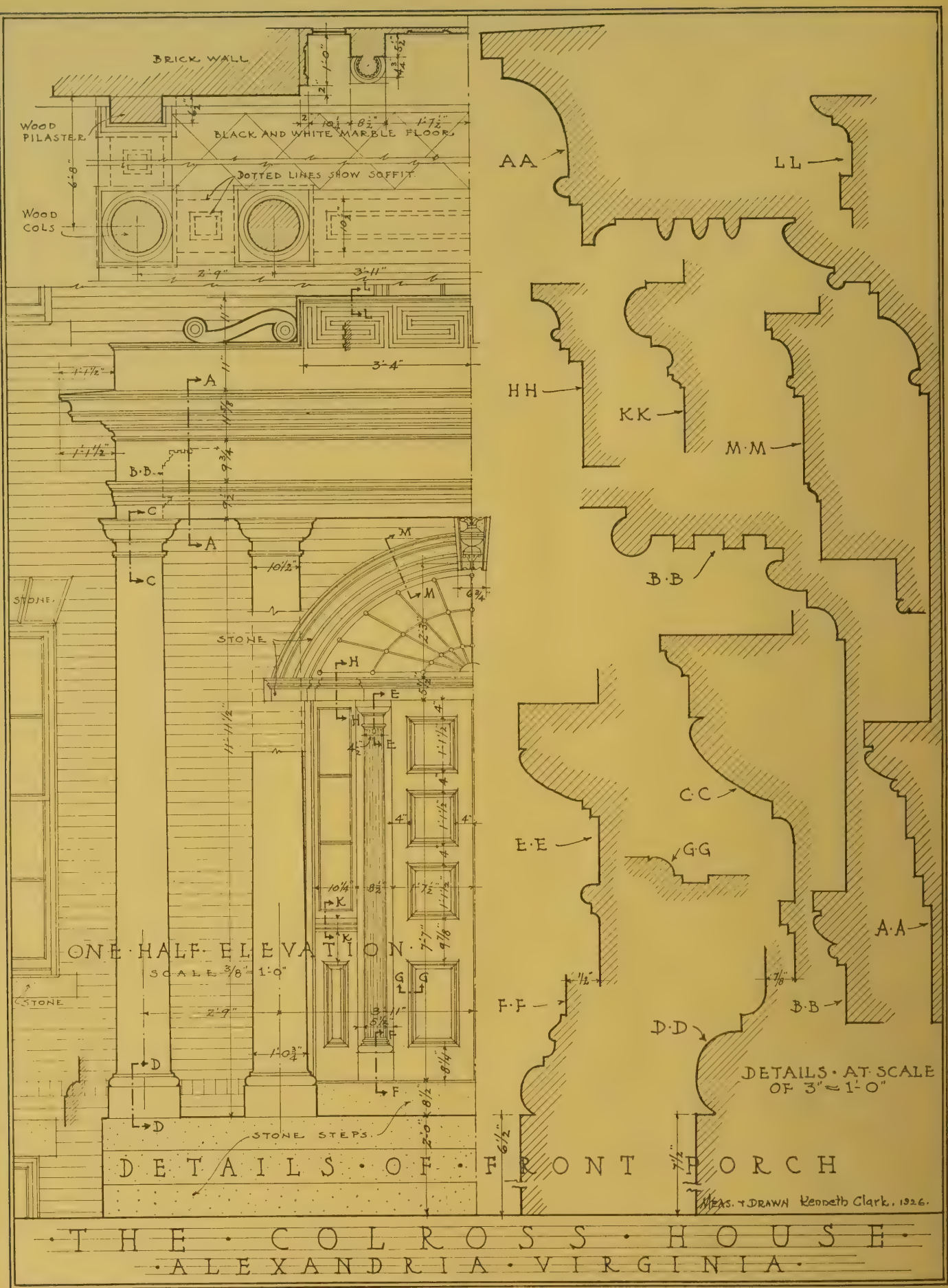


Drawings are reproduced exactly at the scale marked

REAR DOORWAY

MAIN CORNICE

THE COLROSS HOUSE, ALEXANDRIA, VIRGINIA

[*See Scale Details on pages* 12 *and* 13]

THE "LIGHT HORSE" HARRY LEE HOUSE AND 609 CAMERON STREET, ALEXANDRIA, VIRGINIA

HOUSE AT NUMBER 711 PRINCESS STREET, ALEXANDRIA, VIRGINIA

DOORWAY DETAIL—HOUSE AT 711 PRINCESS STREET, ALEXANDRIA, VIRGINIA

THE LLOYD HOUSE, WASHINGTON STREET, ALEXANDRIA, VIRGINIA

HOUSE ON CORNER OF FAIRFAX AND WOLFE STREETS, ALEXANDRIA, VIRGINIA

Wood Construction Details

Notes for the Specification Writer

In Connection with Drawing on Page 23

Nationally accepted standard trade association lumber terms should be used in an architect's specification, rather than the obsolete or local grade names. This will eliminate much of the confusion now existing between the architect, builder and lumber dealer and will also save the client the possibility of having to pay a "safety premium," necessitated by specifications which are not clearly understood by those who contract to supply the lumber. In the suggestions that follow, offered for the assistance of the specification writer in connection with the wood construction details, shown on the following page, the data is stated in terms which have become standard in the producing districts from which the different species are obtained.

Special attention is called to Insulation: one of the most important of recent developments in the building field

LUMBER: In view of the dangers of green or only partially seasoned lumber getting into a building and to establish the authority for the grade names used in the following specifications, it is suggested that a general clause be included in all specifications where lumber is specified as follows:

> **Specifications-General:** "All lumber for any purpose mentioned in these specifications shall be at least air dry when delivered for use and shall be in accordance with the standard lumber association grading rules of the producing district from which the particular kind of lumber furnished shall come."

FRAMING OR STRUCTURAL LUMBER: The lumber required for framing or purely structural purposes need not, of course, be clear lumber so long as such technical defects as it contains do not impair its strength or serviceability for this use. In fact, it would be nothing short of gross extravagance to demand clear lumber for this use. Furthermore, there are several different woods from as many different lumber-producing regions of practically equal structural merit as far as all ordinary house building requirements are concerned. Which one of these woods to choose in any given locality is therefore a question as to which one can be purchased in that locality most economically, a matter determined largely by the distance from the source of production and the consequent freight haul to the market in question. For this reason the specification of Structural lumber should be more or less elastic as is suggested in the following notes:

STUDDING, PLATES, RAFTERS, JOISTS, BLOCKING, ETC.

> **Specifications:** "All structural members, including studding, plates, rafters, joists, blocking, etc., shall be No. 1 Common grade Douglas Fir (or Pacific Coast Hemlock) or (Northern Pine) or (Fir and Larch) and shall be at least air dry when delivered on the job."

SHEATHING & ROOF BOARDS: The structural requirements of these items being less rigid than for the structural items listed above, lower grades should be permitted for reasons of economy.

The common grades suggested in the following specification may be run to a Shiplap pattern or dressed and matched (D&M) as preferred.

The choice of species for these uses is even more inclusive than that suggested above for dimension lumber.

> **Specification:** "Sheathing or roof boards shall be No. 3 Common grade Northern Pine or (Pondosa Pine) or (Fir and Larch) or (White Fir) or (No. 1 Common Douglas Fir) or (Pacific Coast Hemlock), 6" wide and dressed and matched (D&M)."

WINDOW FRAMES: For window frames it is peculiarly essential to use a durable wood and White Pine is therefore recommended without substitutes for all exposed parts such as sills, etc. Again, the grade of material from which the frames are to be worked may safely be left to the millwork manufacturer except as provided for as follows:

> **Specification:** "All window frames shall be manufactured from Genuine White Pine of Weyerhaeuser standard either Northern White Pine (Pinus Strobus) or Idaho White Pine (Pinus Monticola), of suitable grade, free from sap and with clear faces wherever exposed, made to sizes and as per detail shown on drawings."

WINDOW SASH: In addition to Genuine White Pine for window sash, another wood is beginning to enter the millwork field from the Pacific Coast, viz: Douglas Fir. A most excellent wood for a great variety of uses and being exceptionally free from sapwood, due to the large sizes of the logs from which it is cut, it is giving a good account of itself and is deserving of more than ordinary consideration. In allowing it in specifications for sash cuttings, care should be taken, however, to insure its being vertical grain as suggested below:

> **Specifications:** "Window sash shall be made from clear cuttings of Genuine White Pine (Pinus Strobus or Pinus Monticola), free from sapwood (or shall be made from clear cuttings of Vertical Grain Douglas Fir).

INSULATION: As suggested at the top of this page no single item in the construction of the modern house is more essential to comfort, both winter and summer, than a proper job of wall and roof insulation. Nor is there a more important factor in making a house easy and economical to heat. The brand of insulation recommended, namely, Balsam-Wool, is a Weyerhaeuser product, made from chemically treated, fire-resistant, sanitary wood fibre made waterproof and windproof between two sheets of tough, asphalt-lined kraft paper. It is a blanket form of insulation; flexible to permit a good, tight job and of greater practical insulating efficiency than any other similar product on the market today.

Suggested specifications for a complete job of insulation are on file in most architects' offices or may be secured from any of the branch offices of the Wood Conversion Company (Weyerhaeuser By-Products Division), at 1955 University Avenue, Saint Paul; 1849 Straus Building, Chicago; 103 Park Avenue, New York.

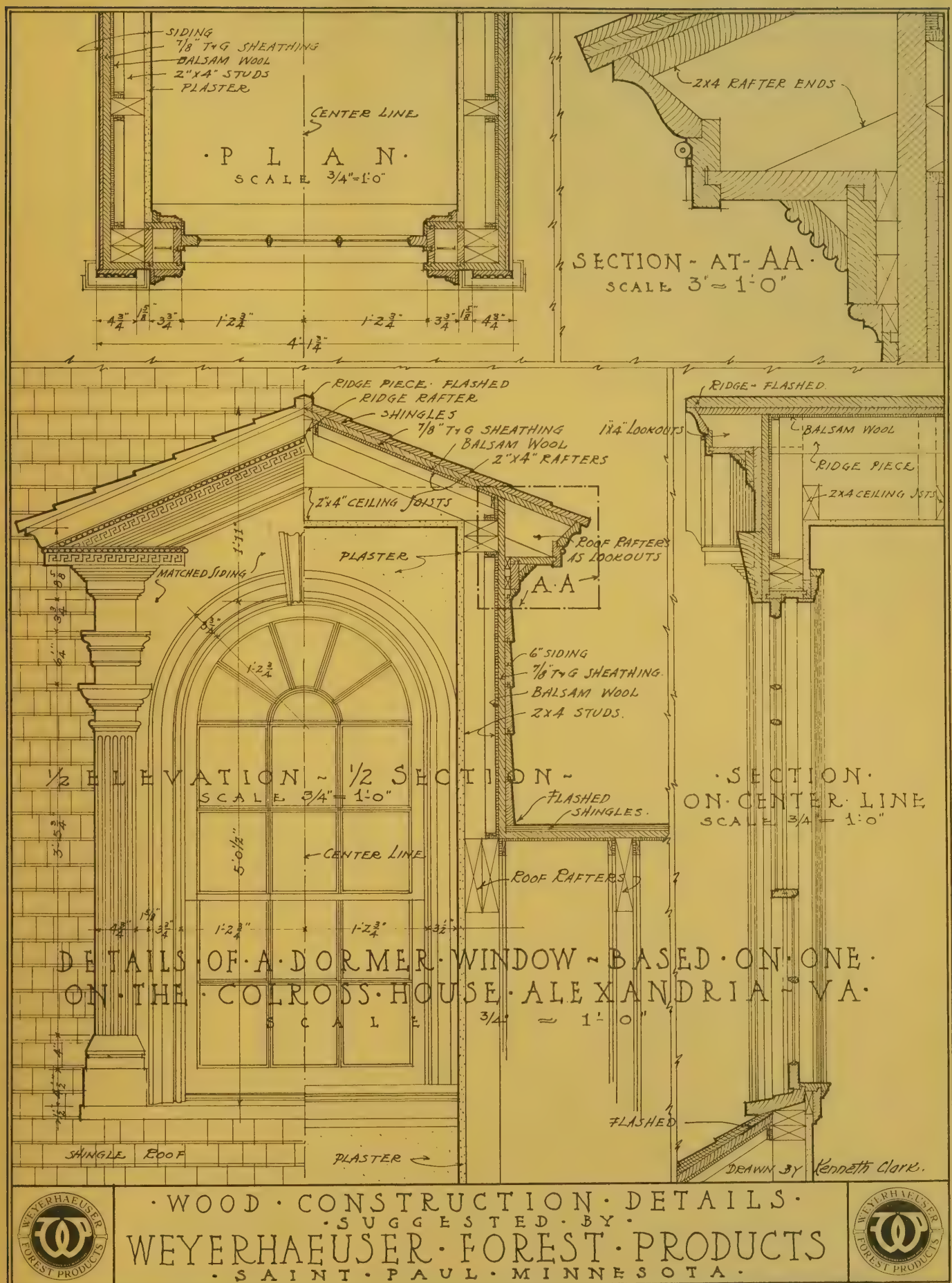
[*Continued on page 24*]

· WOOD · CONSTRUCTION · DETAILS ·

· SUGGESTED · BY ·

WEYERHAEUSER · FOREST · PRODUCTS

· SAINT · PAUL · MINNESOTA ·



·WOOD·CONSTRUCTION·DETAILS·

·SUGGESTED·BY·

WEYERHAEUSER·FOREST·PRODUCTS

·SAINT·PAUL·MINNESOTA·

Wood Construction Details

INSULATION [*Continued from page 21*]

Specifications-General: "Heat insulation shall be standard ½" thick Balsam-Wool, manufactured by the Wood Conversion Company (Weyerhaeuser By-Products Division), Cloquet, Minnesota. Continuity of insulation shall be maintained. Where floors, ceilings or roofs are insulated, as well as outside walls, insulate thoroughly between joists and rafter ends. Throughout, all joints shall be made air-tight, especially at door and window openings. Use full length strips of insulation. End joints, where necessary, shall be butted and covered with lath, nailed through insulation to boarding or header. Insulation strips shall in all cases run in the same direction as studding, joists and rafters."

FOR OUTSIDE WALL INSULATION, including SIDE WALLS OF DORMERS. When studs are 16" O. C., insulate with 17" width Balsam-Wool with back of insulation against inside face of sheathing. The flanges or turnouts shall be continuously fastened by means of laths or strips nailed securely through insulation to the studding on the sides and to sills, plates or headers at the top and bottom.

FOR ROOF INSULATION including DORMER ROOFS. When rafters are 16" O. C., insulate with 17" width Balsam-Wool, applied between the rafters with back of insulation against inside face of roof boarding, fastening in the same manner prescribed for side wall insulation.

SHINGLES: For roof covering of maximum service and lower cost plus the further important advantages of pleasing appearance, no roofing has yet been found to replace the better grades of wood shingle such as are obtainable in all markets today. The White Pine shingles of early days have given way to Western Red Cedar and practically all wood shingles these days are made of this wood. The inherent durability of Western Red Cedar meets the needs fully; the only precautions necessary are to see that the proper grade and thickness of shingles is specified and that they are properly laid with double galvanized or other durable nails.

To cover only the proper specification of the best grade of material the following specification is suggested:

Specification: "Shingles shall be 5 to 2 (5 butts measuring 2 inches) Western Red Cedar, 'A' grade and 100% vertical grain as per the new American Lumber Standard Specifications for 16" shingles."

BEVEL SIDING: For siding two woods suggest themselves, and both are obtainable out of the average lumber dealer's stock in the size indicated in the construction drawing on the preceeding page. Bevel Siding, for instance, is regularly made and stocked by most dealers in 4" and 6" widths (finished to 3½" and 5½") in both Genuine White Pine and Western Red Cedar. Wider siding 8", 10" and 12" wide (finished to 7½", 9½" and 11½" respectively) is called Bungalow Siding but is of exactly the same pattern as the Bevel Siding referred to above and is also available out of stock in either of the woods just mentioned.

The following specification is suggested:

Specification: "Siding shall be 6" standard Bevel Siding, 'B and Better' grade (or 'C' grade) Genuine White Pine," *or*
"Siding shall be 6" Standard Bevel Siding Clear grade (or 'A' grade) Western Red Cedar."

FLUSH SIDING: Where an exposed surface is to be sided flush as in the case of dormer shown on Pages 23-24, *Genuine* White Pine, without alternative, is by all means the wood to use.

Specification: "All matched siding, to be laid flush, shall be made from 'B & Better' Select grade (or 'C' Select grade) or ('D' Select grade) Genuine White Pine, tongued and grooved and surfaced two sides to 25/32" in thickness."

OUTSIDE TRIM: For outside trim, including pilasters, casings, cornice lumber, mouldings, caps, etc., there is no satisfactory substitute for Genuine White Pine in the better class of building construction. A naturally durable wood, White Pine has the important ability to "stay put" and to hold tight at the joints plus the further advantage of taking and holding paint.

Inasmuch as these items are usually furnished by the millwork house, manufactured from "shop" or "factory grades," no grade specification is recommended beyond that suggested in the following specification:

Specification: "All outside trim, including pilasters, casings, cornice lumber, mouldings, caps, etc., shall be cut from Genuine White Pine (Pinus Strobus or Pinus Monticola), free from sapwood and of such grade as to yield practically clear faces on all exposed surfaces."

Table Showing Nominal and actual (finished or surfaced) Sizes of "Select" and "Shop" or "Factory" Grades

Genuine White Pine *and* Pondosa Pine

NOMINAL THICKNESS	"SELECT" Actual [Dressed] Thickness	"SHOP" OR "FACTORY" Actual [Dressed] Thickness
1 inch —will surface two sides to	25/32 inch	25/32 inch
1¼ inch— " " " " "	1⅛ inch	1 5/32 inch
1½ inch— " " " " "	1⅜ inch	1 13/32 inch
2 inch — " " " " "	1¾ inch	1 26/32 inch
2¼ inch— " " " " "	2⅛ inch	2⅛ inch
2½ inch— " " " " "	2⅜ inch	2⅜ inch
3 inch — " " " " "	2¾ inch	2¾ inch

WEYERHAEUSER FOREST PRODUCTS
Merchants National Bank Building, SAINT PAUL, MINNESOTA

WEYERHAEUSER FOREST PRODUCTS

SERVICE AND SALES DEPARTMENTS OF THE
WEYERHAEUSER AFFILIATED COMPANIES

PRODUCERS *of Northern White Pine and Norway Pine in the* LAKE STATES; *Idaho White Pine, Pondosa Pine, Idaho Spruce, Red Fir and Larch in the* INLAND EMPIRE; *Douglas Fir, Western Red Cedar and Pacific Coast Hemlock on the* PACIFIC COAST.

SERVICE DEPARTMENT

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SAINT PAUL, MINNESOTA
Telephone: CEDAR 6789

SALES DEPARTMENT

WEYERHAEUSER SALES COMPANY
OLD NATIONAL BANK BUILDING
SPOKANE, WASHINGTON
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BRANCH SERVICE & SALES OFFICES

MINNEAPOLIS	CHICAGO	BALTIMORE	PHILADELPHIA	NEW YORK
806 Plymouth Building	208 South LaSalle Street	Lexington Building	1600 Arch Street	285 Madison Avenue
Telephone Geneva 7329	*Telephone* Wabash 3365	*Telephone* Plaza 6061	*Telephone* Rittenhouse 7866	*Telephone* Caledonia 2187

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DISTRICT REPRESENTATIVES IN 75 PRINCIPAL CITIES IN:

COLORADO	IOWA	MISSOURI	NEW YORK	SOUTH DAKOTA
CONNECTICUT	MASSACHUSETTS	MONTANA	NORTH DAKOTA	UTAH
ILLINOIS	MICHIGAN	NEBRASKA	OHIO	WEST VIRGINIA
INDIANA	MINNESOTA	NEW JERSEY	PENNSYLVANIA	WISCONSIN

SPECIES OF WOODS

WHITE PINE	PONDOSA PINE	IDAHO SPRUCE	DOUGLAS FIR
NORWAY PINE	RED FIR AND LARCH	PACIFIC COAST HEMLOCK	WESTERN RED CEDAR

PRODUCTS MANUFACTURED

ROUGH and FINISHED LUMBER
POSTS, POLES and PILING
"BALSAM-WOOL"—Building Insulation
BOOK, NEWS-PRINT and WRAPPING PAPER

NAME AND LOCATION OF MANUFACTURING PLANTS

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BONNERS FERRY LUMBER CO., Bonners Ferry, Idaho
CLOQUET LUMBER CO., Cloquet, Minn.
HUMBIRD LUMBER CO., Sandpoint, Idaho
JOHNSON-WENTWORTH CO., Cloquet, Minn.
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THE NORTHWEST PAPER CO., Cloquet, Minnesota
POTLATCH LUMBER CO., Potlatch, Idaho
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WHITE PINE

SERIES OF

Architectural Monographs

Volume XII *Number* 5

EARLY DWELLINGS IN NEW HAMPSHIRE

BY

A. E. Ferguson

AN

Architectural Monograph

EARLY DWELLINGS IN NEW HAMPSHIRE

By A. E. Ferguson

Being the FIFTH *Number of Volume XII and*
THE SIXTY-NINTH MONOGRAPH OF

THE WHITE PINE SERIES

Intimate treatiſes of the ARCHITECTURE of the *American Colonies* and of the *Early Republic* preſented with well ordered completeneſs, to further a broader underſtanding and to create a permanent Record of *Early American* ARCHITECTURE.

RUSSELL F. WHITEHEAD, Editor

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NEW YORK

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[*Single Monograph, Fifty Cents*]

DETAIL OF ENTRANCE

THE GENERAL REED HOUSE, FITZWILLIAM, NEW HAMPSHIRE

Early Dwellings in New Hampshire

by A. E. FERGUSON

AN ARCHITECTURAL pilgrimage through New Hampshire reveals the fact that the early settlers did not follow any fixed style in building their houses. There are no characteristics of mass or detail which occur often enough to make it possible to define a "typical" New Hampshire dwelling.

Portsmouth (Strawberry Bank—1623) and Hampton, the seaport towns, among the first to be settled, attracted a different type of settlers from those colonists who settled the inland towns of Exeter (founded in 1638 by the Reverend John Wheelwright) and Dover (founded by Edward Hilton, sent over from England about 1627), while the farmers sought their fortunes in the fertile valley of the Connecticut. The territory included in the Province of New Hampshire, which from 1638 to 1678 was within the boundaries of Massachusetts, was so large and so sparsely settled that there was small chance for the pioneers to adopt the building traditions of their neighbors. They were little disposed to union among themselves. They came from the other colonies bringing their local architectural traditions with them, and developed these to suit their new environment, producing results which are a constant surprise to the student of early American architecture as he wends his way about the State.

The mansions of Portsmouth are familiar to the readers of *The White Pine Series*.* They represent the more sophisticated and elaborate New Hampshire dwelling and were the homes of many of the most distinguished citizens of the late Colonial and early Republican periods.

Owing to the many varieties of religious opinion that prevailed among the radical pioneers, each new grouping and consequent settlement had an individuality all its own, determined by the personality of its leader and the ideas that he represented. The traveller should be prepared to find, therefore, even in the most unexpected places, many examples of early dwellings each with marked individuality. Take, for instance, New Ipswich, settled about 1735, a hamlet uncontaminated by the summer tourist, drowsing its way through the course of time in a beautiful setting of green hills and fertile valleys. Here one finds the Laura Hooper House, simple, well proportioned, a farmhouse of the better type, and, near by, the imposing Barrett mansion with stables, outbuildings and all the appurtenances of a Colonial "Estate." (Mr. Whitehead promises a full and detailed presentation of this house, as it is worthy of a more extended survey than this Monograph can give to it.)

The General Reed House, at Fitzwilliam, is a fine example of the well studied composition of the later 18th-century period. The nicely proportioned doorway, perfect in detail, the well thought out fenestration and the accent of stability added by the quoins make the ensemble worthy of serious consideration by the modern architect. This house seems to me to be as excellent an example of the "Colonial" as any I have ever seen. Out of the infinite variety of types and styles that make up our early architectural period, this house and a few others similar to it, scattered through the New England section, express the true conception of our pre-Revolutionary builders.

Houses like this one were developed to fit American conditions, life and manners at a time when people had leisure to study how to express the ideals of the American family and hearth in the household arts. The early American styles not only express our ideals, but, as a practical matter, are easy ones in which to design. Their forms are simple, suited to present-day methods of construction in contrast with the forms of other styles which are less direct and therefore more costly. They are certainly more appropriate than the pseudo-Spanish and Italian, the lath and plaster "half timber" and other "adoptions" that supply the present-day Realtor with his stock of "stage-scenery" masquerading as architecture.

The small farmhouse at Westmoreland is an interesting example of the beauty of simplicity. A foursquare, ridge-roof house has been made a lovely piece of architecture by good proportion, fine fenestration and an elaborately moulded doorway, with just a suggestion of rugged ornament that suits so well its background of simple clapboards.

This little town of Westmoreland, by the way, has one of the most beautiful situations in New England. Anyone whose patriotic pride has been dampened by a

*"THREE-STORY COLONIAL HOUSES OF NEW ENGLAND," by Frank Chouteau Brown, Volume III, Number 1; "PORTSMOUTH, NEW HAMPSHIRE, AN EARLY AMERICAN METROPOLIS," by Electus D. Litchfield, Volume VII, Number 1.

worship of the lovely, rural, English countryside should take the trip to this hamlet, ascend Park Hill and gaze out upon the Connecticut Valley from that eminence. A more perfect picture of rolling hills, winding rivers and all that goes to make up an ideal landscape is seldom found. Were this spot near one of the "tourist centers" of Europe,it would be famed throughout the world. As it is, it is seen by perhaps a half dozen people a year, without counting the local inhabitants who are few and far between.

The Moulton House—a general view of which was published in Volume X, Number 6 of *The White Pine Series*—is a particularly interesting example architecturally, both within and without. Till a year or so ago it was at the crossroads in Hampton, a pathetic structure, slowly disintegrating. It was threatened at any moment with demolition, was then bought by Mr. Harlan G. Little, moved to its present setting and restored most sympathetically. Measured drawings of three of the rooms are shown on pages 14 and 16 of this Monograph. The rear has a most interesting gambrel wing, seemingly of a much earlier period than the main house. It was probably the first structure to which the main house was added.

Map of the Province of New Hampshire
Made in 1777—Showing the most inhabited parts

The two houses at Croydon, illustrated by Plates CXXV and CXXVI, stand side by side in a village of about five houses, and by their juxtaposition accentuate their absolute dissimilarity. The one with the fence and the arched doorway has a certain charm in being based on precedent, the beautiful cornice of the doorway having a more or less classic feeling of design. The Barton House next door is no less charming, but the designer here allowed himself free play and has produced some detail that is original and full of naïveté. The little sub frieze of ornament in the location that is filled by dentils in the usual examples is a startling innovation that justifies itself by the finished results. The planning of a motive above the entrance of almost the same scale and design as the entrance itself is unusual to say the least. But is it not interesting?

These artisans of our early days violated the very rules that present-day teachings pronounce necessary to good design, but their finished houses prove how impossible it is to lay down rules for any artistic medium of expression. The inherent good judgment, culture, call it what you will, of some of our early builders was founded on a basis of good taste and an appreciation of proportion that are very difficult to account for when there was no opportunity for architectural education as judged by modern standards. Can the modern farmer-carpenters produce the results that these pioneers obtained? For answer look about you in any "modern" American town. It is written indelibly in the jig-sawed ornaments, the "gothic" windows and other atrocities that fifty years of Victorian ugliness have left behind.

The period immediately following the War of 1812, except for isolated instances, saw the end of a style of architecture that has never been revived. Although we are on the verge of a renaissance now, the modern architect is just beginning to understand the true motives and subtle characteristics that underlie the work of

FARMHOUSE NEAR WESTMORELAND, NEW HAMPSHIRE

THE LAURA HOOPER HOUSE, NEW IPSWICH, NEW HAMPSHIRE

THE GENERAL REED HOUSE, FITZWILLIAM, NEW HAMPSHIRE

their predecessors, and the "Colonial" absurdities of the past decades are giving way to buildings designed by men who through study and knowledge have sensed the beauties of the old work and are incorporating them into their daily practice.

The interior of the house at Claremont and the china closet in the Bellows House at Walpole—while entirely different in feeling and execution—are both fine examples of the work of their periods. That in Claremont shows a sophistication and a delicacy that are almost Adamesque, while the Bellows china closet, of an earlier period, has an ingenious combination of moldings, etc., that perhaps will not bear minute analysis, yet in effect the whole is good.

The Swift House of Orford is entirely different from any of the other examples illustrated. It was probably built during the period which began about 1825, as it has many features that are not in keeping with the earlier work. The tremendous arched window in the pediment is out of scale, yet the general proportions of the façade are good and the brickwork has a lovely texture. The columnar entrances, of which this house has no less than three, are well proportioned and show a lively variation of detail. The wrought-iron railing over the front entrance porch adds the finishing touch.

The houses illustrated in this Monograph were selected from a large collection of interesting examples which have been studied and photographed by the Editor and his able collaborators. We are permitted to give but a glimpse of the New Hampshire material which is in store for the readers of *The White Pine Series*. One Monograph will be devoted to Exeter, we understand, and another to Haverhill and adjoining villages. We regretfully pass over our task to others who will be more than repaid for their intimate study of these early dwellings, churches and public buildings.

DETAIL OF ENTRANCE

THE BARTON HOUSE—CROYDON, NEW HAMPSHIRE

THE BARTON HOUSE, CROYDON, NEW HAMPSHIRE

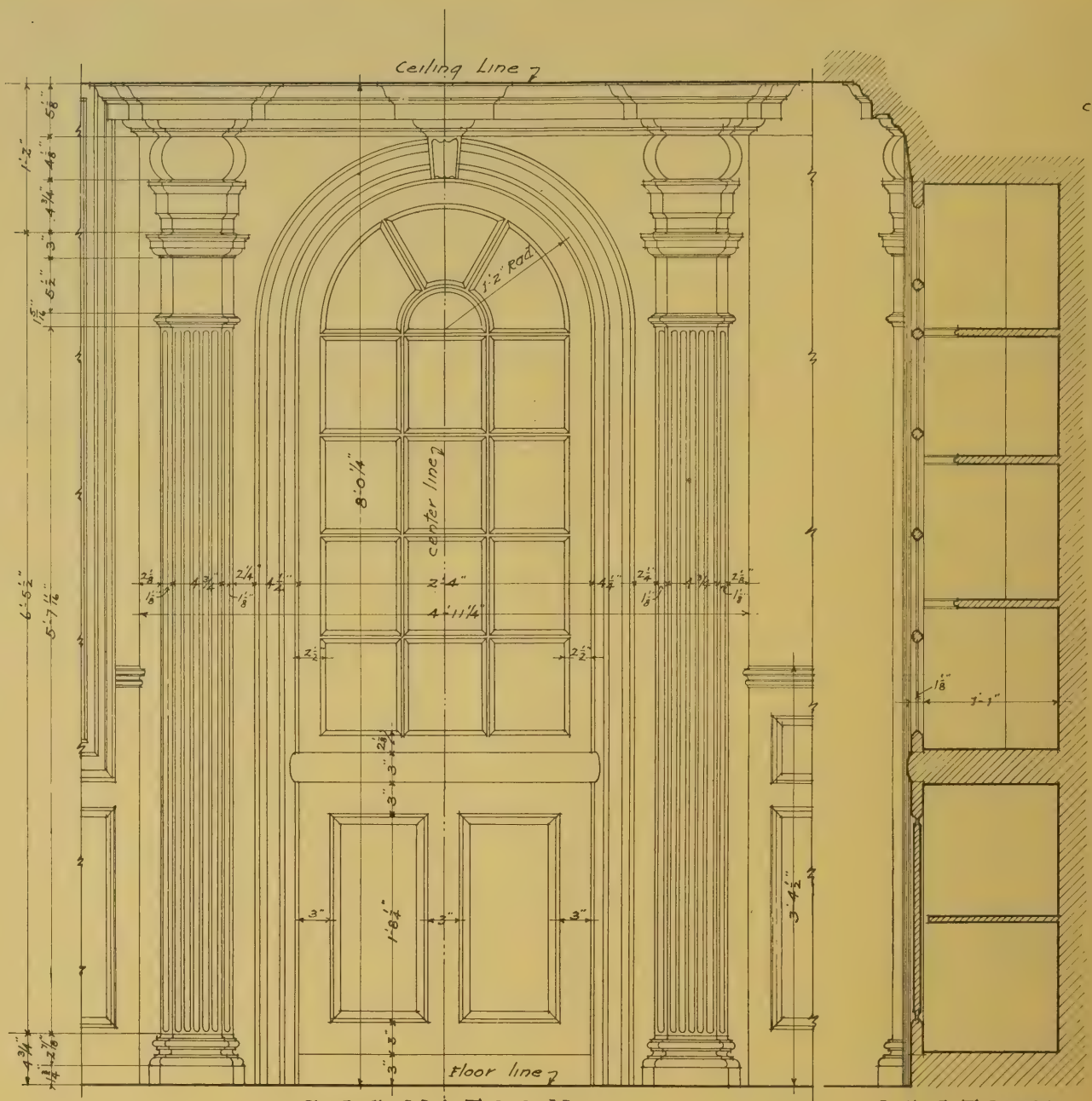
ENTRANCE DOORWAY DETAIL—GOODENOUGH HOUSE AT CROYDON, NEW HAMPSHIRE

The WHITE PINE SERIES *of*
EARLY AMERICAN DOCUMENTS

With MEASURED DRAWINGS *from*
The George F. Lindsay Collection

The JOHN BELLOWS HOUSE
WALPOLE, NEW HAMPSHIRE

THE CHINA CLOSET



CHINA · CLOSET · IN · THE

· WALPOLE · NE

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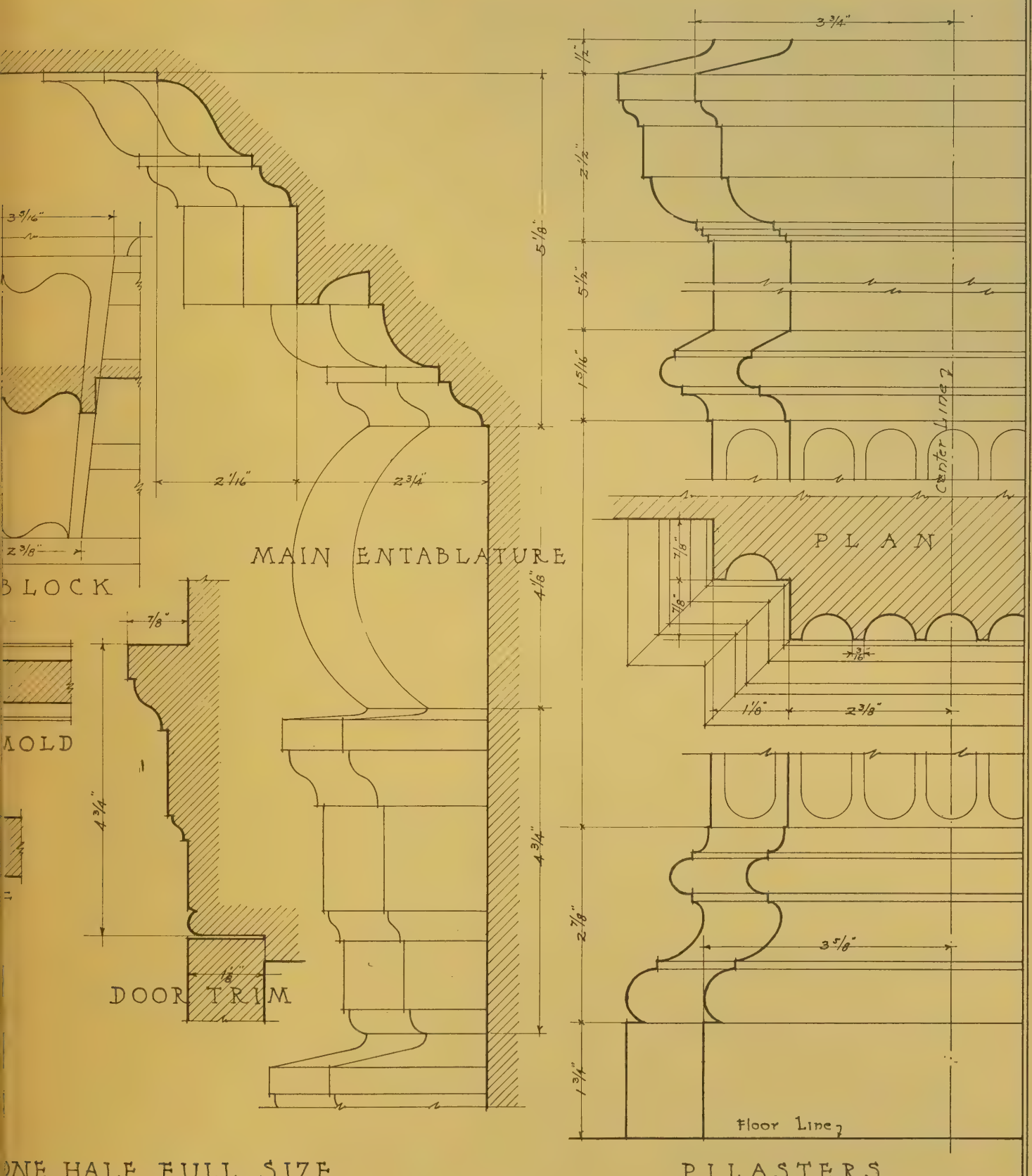

ONE HALF FULL SIZE

PILASTERS

JOHN · BELLOWS · HOUSE

HAMPSHIRE ·

MEAS & DRAWN Kenneth Clark 1925.

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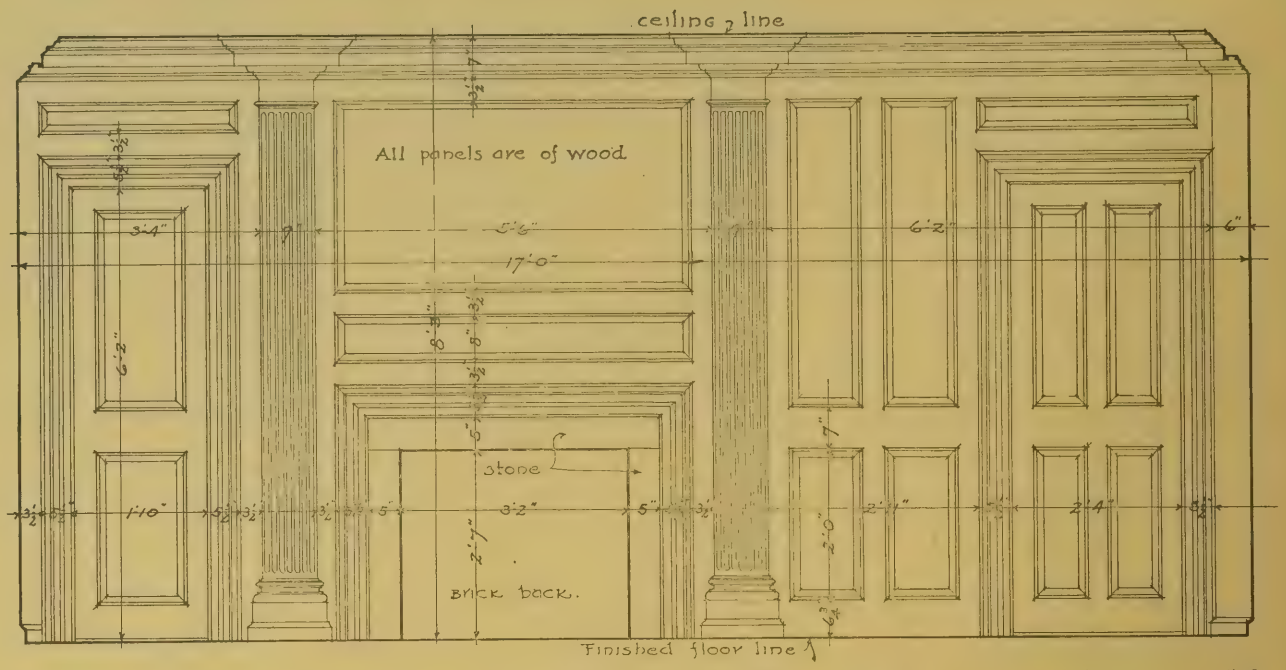
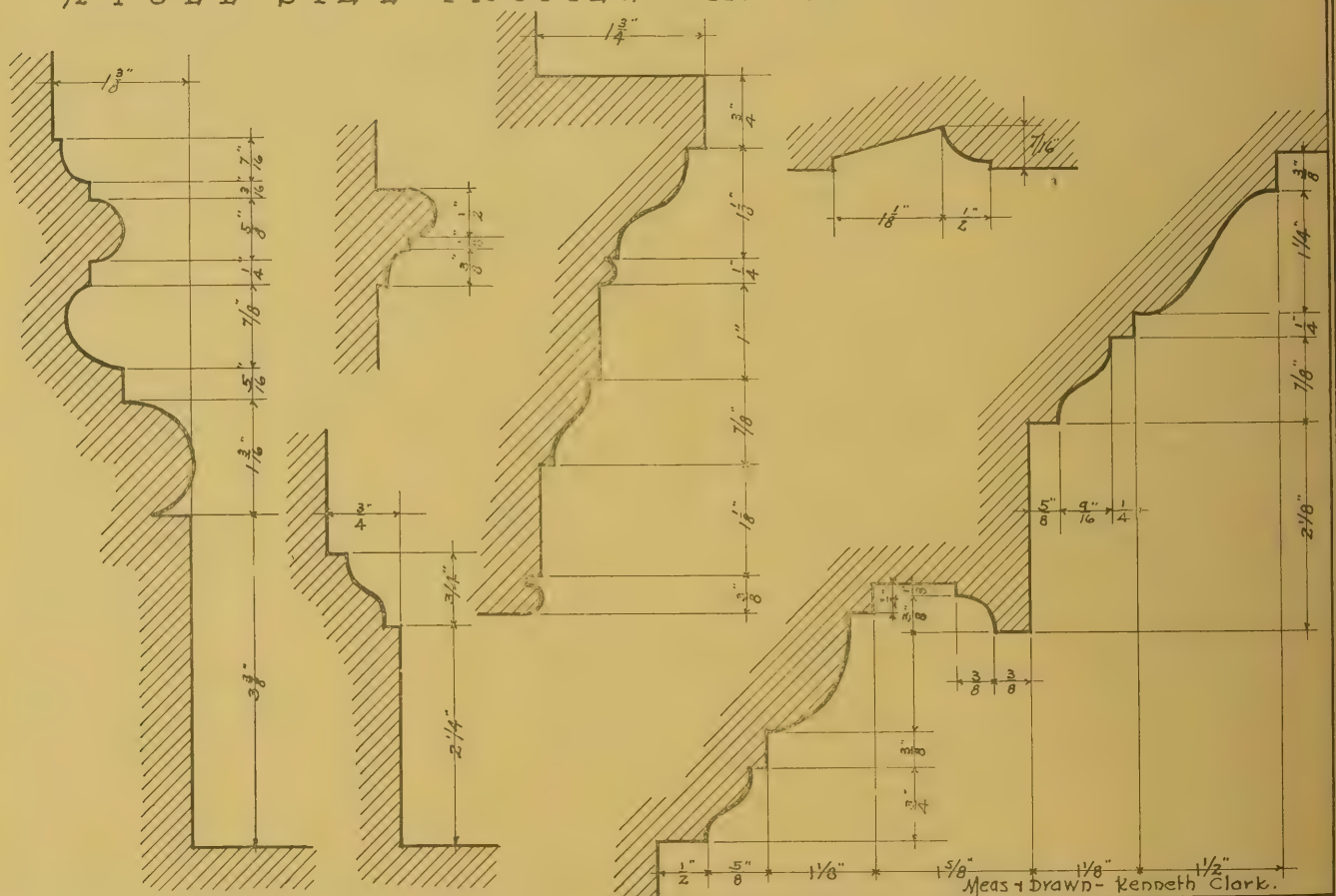


NORTH · WALL · NORTH · EAST · ROOM

SECOND · FLOOR

3/8" = 1'-0"

½ FULL · SIZE · PROFILES · APPLY · TO · ALL · ROOMS



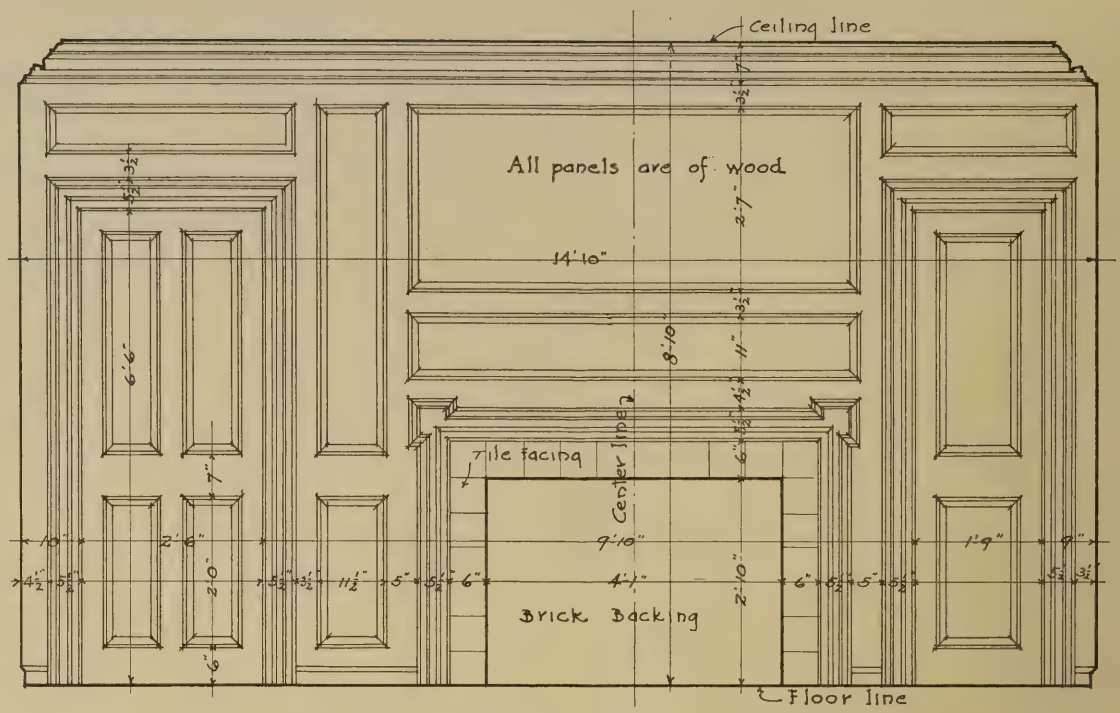
THE · MOULTON · HOUSE

· HAMPTON · NEW · HAMPSHIRE ·

Drawings are reproduced exactly at the scale marked

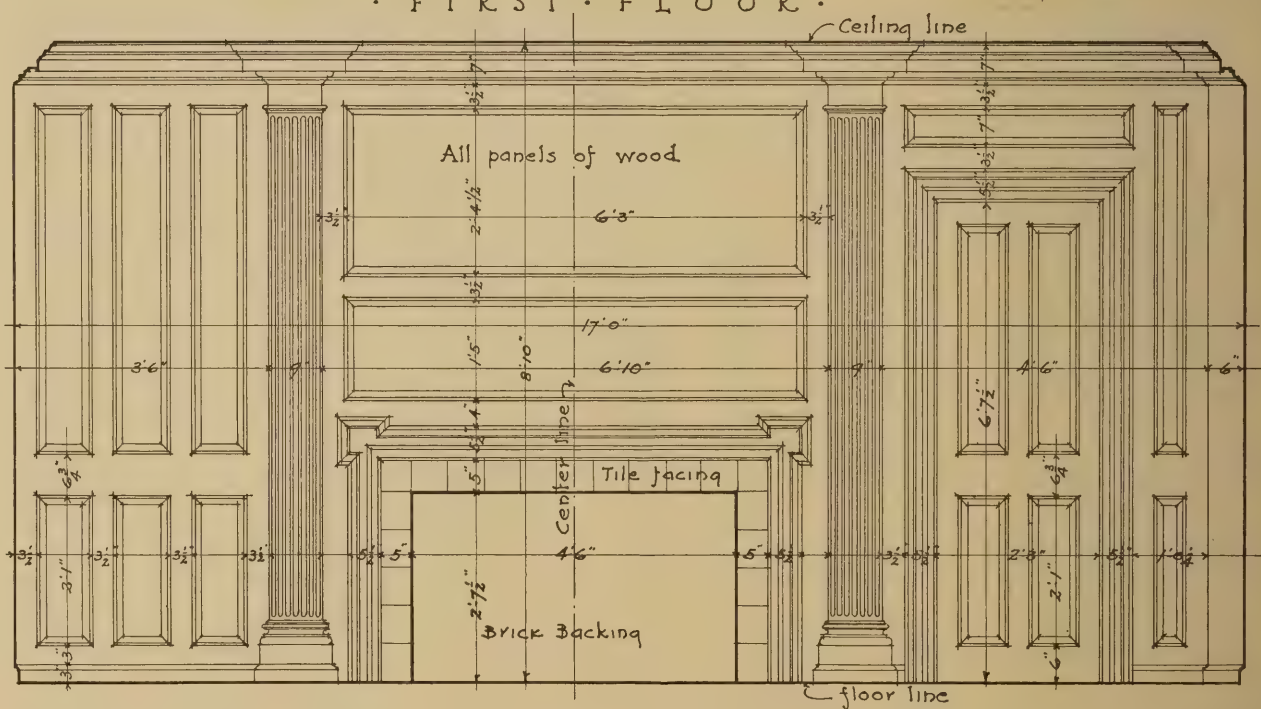
THE GOODENOUGH HOUSE, CROYDON, NEW HAMPSHIRE

THE GENERAL MOULTON HOUSE, HAMPTON, NEW HAMPSHIRE



NORTH · WALL · SOUTH · EAST · ROOM

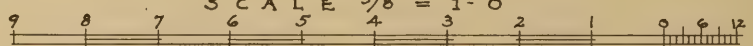
· FIRST · FLOOR ·



NORTH · WALL · NORTH · EAST · ROOM

· FIRST · FLOOR ·

SCALE 3/8" = 1'-0"



Meas + Drawn Kenneth Clark.

THE · MOULTON · HOUSE

· HAMPTON · NEW · HAMPSHIRE ·

THE SWIFT HOUSE, ORFORD, NEW HAMPSHIRE

DETAIL OF SIDE DOORWAY—THE SWIFT HOUSE, ORFORD, NEW HAMPSHIRE

THE DEXTER HOUSE, CLAREMONT, NEW HAMPSHIRE

PARLOR—THE DEXTER HOUSE, CLAREMONT, NEW HAMPSHIRE

Wood Construction Details

Notes for the Specification Writer

In Connection with Drawing on Page 23

Nationally accepted standard trade association lumber terms should be used in an architect's specification, rather than the obsolete or local grade names. This will eliminate much of the confusion now existing between the architect, builder and lumber dealer and will also save the client the possibility of having to pay a "safety premium," necessitated by specifications which are not clearly understood by those who contract to supply the lumber. In the suggestions that follow, offered for the assistance of the specification writer in connection with the wood construction details, shown on the following page, the data is stated in terms which have become standard in the producing districts from which the different species are obtained.

Special attention is called to Insulation: one of the most important of recent developments in the building field

LUMBER: In view of the dangers of green or only partially seasoned lumber getting into a building and to establish the authority for the grade names used in the following specifications, it is suggested that a general clause be included in all specifications where lumber is specified as follows:

> Specifications-General: "All lumber for any purpose mentioned in these specifications shall be at least air dry when delivered for use and shall be in accordance with the standard lumber association grading rules of the producing district from which the particular kind of lumber furnished shall come."

FRAMING OR STRUCTURAL LUMBER: The lumber required for framing or purely structural purposes need not, of course, be clear lumber so long as such technical defects as it contains do not impair its strength or serviceability for this use. In fact, it would be nothing short of gross extravagance to demand clear lumber for this use. Furthermore, there are several different woods from as many different lumber-producing regions of practically equal structural merit as far as all ordinary house building requirements are concerned. Which one of these woods to choose in any given locality is therefore a question as to which one can be purchased in that locality most economically, a matter determined largely by the distance from the source of production and the consequent freight haul to the market in question. For this reason the specification of Structural lumber should be more or less elastic as is suggested in the following notes:

STUDDING, PLATES, RAFTERS, JOISTS, ETC.

> Specifications: "All structural members, including studding, plates, rafters, joists, blocking, etc., shall be No. 1 Common grade Douglas Fir (or Pacific Coast Hemlock) or (Northern Pine) or (Fir and Larch) and shall be at least air dry when delivered on the job."

SHEATHING & ROOF BOARDS: The structural requirements of these items being less rigid than for the structural items listed above, lower grades should be permitted for reasons of economy.

The common grades suggested in the following specification may be run to a Shiplap pattern or dressed and matched (D & M) as preferred.

The choice of species for these uses is even more inclusive than that suggested above for dimension lumber.

> Specification: "Sheathing or roof boards shall be No. 3 Common grade Northern Pine or (Pondosa Pine) or (Fir and Larch) or (White Fir) or (No. 1 Common Douglas Fir) or (Pacific Coast Hemlock), 6" wide and dressed and matched (D & M)."

SUB FLOORS: For sub floors the same specifications may be used unless, for reasons of economy, it may be desired to permit the use of "random widths" and "random lengths" square edged lumber.

WINDOW FRAMES and OUTSIDE DOOR FRAMES: For window frames it is peculiarly essential to use a durable wood and White Pine is therefore recommended without substitutes for all exposed parts such as sills, etc. Again, the grade of material from which the frames are to be worked may safely be left to the millwork manufacturer except as provided for as follows:

> Specification: "All window frames shall be manufactured from Genuine White Pine of Weyerhaeuser standard either Northern White Pine (Pinus Strobus) or Idaho White Pine (Pinus Monticola), of suitable grade, free from sap and with clear faces wherever exposed, made to sizes and as per detail shown on drawings."

WINDOW SASH: In addition to Genuine White Pine for window sash, another wood is beginning to enter the millwork field from the Pacific Coast, viz: Douglas Fir. A most excellent wood for a great variety of uses and being exceptionally free from sapwood, due to the large sizes of the logs from which it is cut, it is giving a good account of itself and is deserving of more than ordinary consideration. In allowing it in specifications for sash cuttings, care should be taken, however, to insure its being vertical grain as suggested below:

> Specifications: "Window sash shall be made from clear cuttings of Genuine White Pine (Pinus Strobus or Pinus Monticola), free from sapwood (or shall be made from clear cuttings of Vertical Grain Douglas Fir).

INSULATION: As suggested at the top of this page no single item in the construction of the modern house is more essential to comfort, both winter and summer, than a proper job of wall and roof insulation. Nor is there a more important factor in making a house easy and economical to heat. The brand of insulation recommended, namely, Balsam-Wool, is a Weyerhaeuser product, made from chemically treated, fire-resistant, sanitary wood fibre made waterproof and windproof between two sheets of tough, asphalt-lined kraft paper. It is a blanket form of insulation; flexible to permit a good, tight job and of greater practical insulating efficiency than any other similar product on the market today.

Suggested specifications for a complete job of insulation are on file in most architects' offices or may be secured from any of the branch offices of the Wood Conversion Company (Weyerhaeuser By-Products Division), at 1955 University

[*Continued on page 24*]

WOOD · CONSTRUCTION · DETAILS ·

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WEYERHAEUSER · FOREST · PRODUCTS

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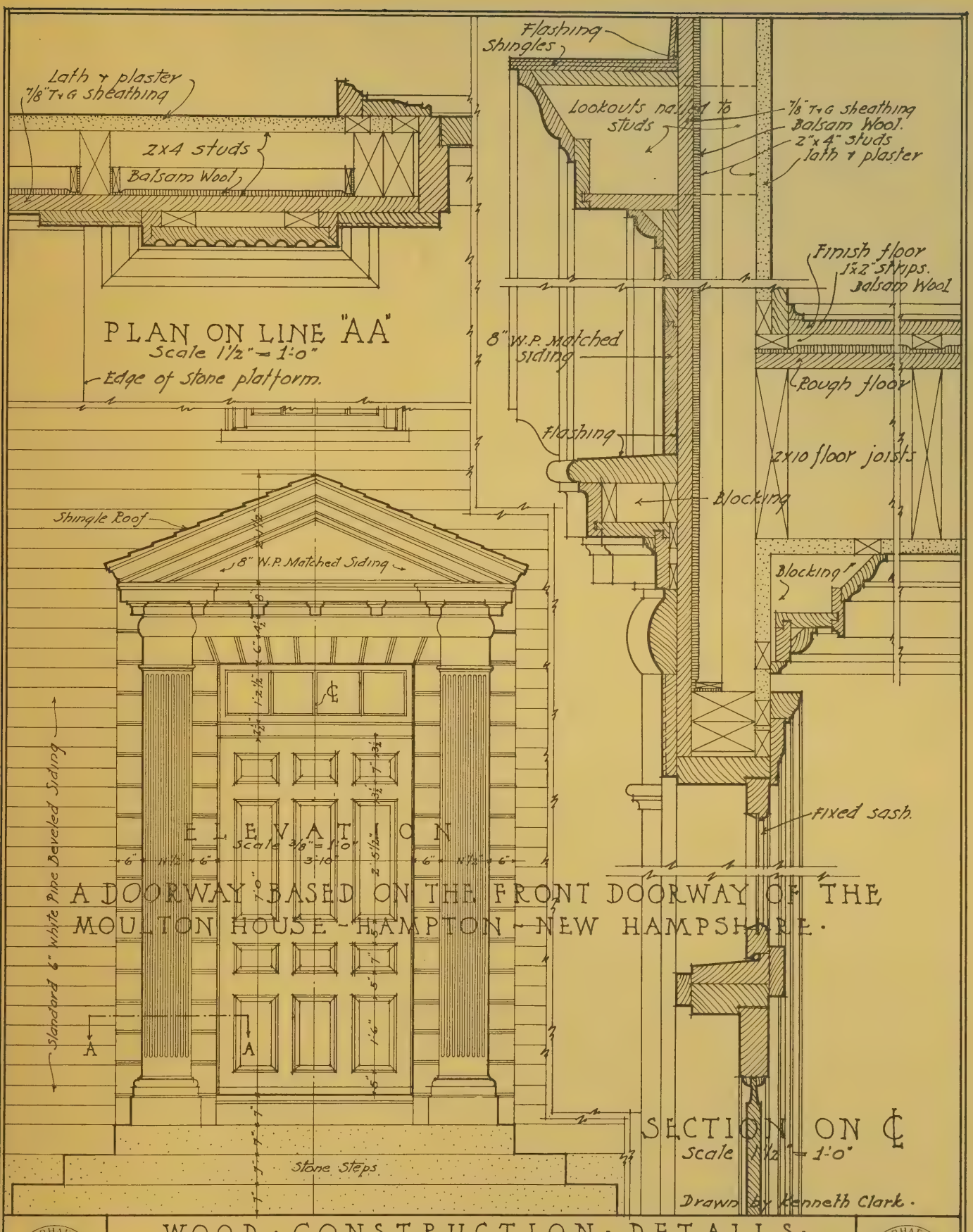

WOOD · CONSTRUCTION · DETAILS ·

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INSULATION [*Continued from page 21*]

Avenue, Saint Paul; 1849 Straus Building, Chicago; and 103 Park Avenue, New York.

> **Specifications-General:** "Heat insulation shall be standard ½"-thick Balsam-Wool, except for roof or top-floor ceiling insulation which shall be 1" thick Balsam-Wool, manufactured by the Wood Conversion Company (Weyerhaeuser By-Products Division), Cloquet, Minnesota. Continuity of insulation shall be maintained. Where floors, ceilings or roofs are insulated, as well as outside walls, insulate thoroughly between joists and rafter ends. Throughout, all joints shall be made air-tight, especially at door and window openings. Use full-length strips of insulation. End joints, where necessary, shall be butted and covered with lath, nailed through insulation to boarding or header. Insulation strips shall in all cases run in the same direction as studding, joists and rafters."

FOR OUTSIDE WALL INSULATION, including SIDE WALLS OF DORMERS. When studs are 16" O.C., insulate with 17"-width Balsam-Wool with back of insulation against inside face of sheathing. The flanges or turnouts shall be continuously fastened by means of laths or strips nailed securely through insulation to the studding on the sides and to sills, plates or headers at the top and bottom.

FOR ROOF INSULATION, including DORMER ROOFS. When rafters are 16" O. C., insulate with 17"-width Balsam-Wool, 1" thick, applied between the rafters with back of insulation against inside face of roof boarding, fastening in the same manner prescribed for side-wall insulation.

FOR FLOOR INSULATION: Insulate with 33-inch width Balsam-Wool, applied over sub-floor with edges butted together over every other joist. Fur over insulation with 1-inch x 2-inch furring strips over each joist to receive finish floor.

SHINGLES: For roof covering of maximum service and lower cost plus the further important advantage of pleasing appearance, no roofing has yet been found to replace the better grades of wood shingle such as are obtainable in all markets today. The White Pine shingles of early days have given way to Western Red Cedar and practically all wood shingles these days are made of this wood. The inherent durability of Western Red Cedar meets the needs fully; the only precautions necessary are to see that the proper grade and thickness of shingles is specified and that they are properly laid with double galvanized or other durable nails.

To cover only the proper specification of the best grade of material the following specification is suggested:

> **Specification:** "Shingles shall be 5 to 2 (5 butts measuring 2 inches) Western Red Cedar, 'A' grade and 100% vertical grain as per the new American Lumber Standard Specifications for 16" shingles."

BEVEL SIDING: For siding two woods suggest themselves, and both are obtainable out of the average lumber dealer's stock in the size indicated in the construction drawing on the preceeding page. Bevel Siding, for instance, is regularly made and stocked by most dealers in 4" and 6" widths (finished to 3½" and 5½") in both Genuine White Pine and Western Red Cedar. Wider siding 8", 10" and 12" wide (finished to 7½", 9½" and 11½" respectively) is called "Bungalow Siding" but is of exactly the same pattern as the Bevel Siding referred to above and is also available out of stock in either White Pine or Western Red Cedar.

> **Specification:** "Siding shall be 6" standard Bevel Siding, 'B and Better' grade (or 'C' grade) Genuine White Pine," *or*
> "Siding shall be 6" Standard Bevel Siding Clear grade (or 'A' grade) Western Red Cedar."

OUTSIDE TRIM: For outside trim, including pilasters, casings, cornice lumber, mouldings, caps, etc., there is no satisfactory substitute for Genuine White Pine in the better class of building construction. A naturally durable wood, White Pine has the important ability to "stay put" and to hold tight at the joints plus the further advantage of taking and holding paint.

Inasmuch as these items are usually furnished by the millwork house, manufactured from "Shop" or "Factory" grades, no grade specification is recommended beyond that suggested in the following specification:

> **Specification:** "All outside trim, including pilasters, casings, cornice lumber, mouldings, caps, etc., shall be cut from Genuine White Pine (Pinus Strobus or Pinus Monticola), free from sapwood and of such grade as to yield practically clear faces on all exposed surfaces."

OUTSIDE DOORS: For outside doors the solid Genuine White Pine door is recommended without alternative.

> **Specification:** "All exterior doors shall be made from clear cuttings of Genuine White Pine of Weyerhaeuser standard, either Northern White Pine (Pinus Strobus) or Idaho White Pine (Pinus Monticola) with solid stiles and rails and panels of detail shown on drawings."

INTERIOR TRIM, including inside casings, cornice, etc.: Genuine White Pine or Pondosa Pine are suggested for all *inside* trim of the character detailed on the preceding page. Genuine White Pine lends itself to intricate carved ornament a little more readily, perhaps, than the general run of Pondosa Pine. Both of these woods are practical and will give service and, with the proper selection of stock at the millwork factory, either one will meet the requirements imposed by the details under consideration. The availability of these species of wood, the ease and care with which they can be worked, the ability to "stay put" after once in place, and the perfection with which they take and hold paint are qualities which recommend their specification.

> **General:** All lumber used for interior trim (carved and moulded work, pilasters, casings, plinth blocks, panels, wainscot, etc.) shall be Genuine White Pine (or Pondosa Pine) having clear faces wherever exposed and shall be of detail as shown on the drawings.

NOTE: Clear cuttings in both Genuine White Pine and Pondosa Pine are available in the so-called "Factory" or "Shop" grades carried in stock by millwork manufacturers.

WEYERHAEUSER FOREST PRODUCTS

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PRODUCERS *of Northern White Pine and Norway Pine in the* LAKE STATES; *Idaho White Pine, Pondosa Pine, Idaho Spruce, Red Fir and Larch in the* INLAND EMPIRE; *Douglas Fir, Western Red Cedar and Pacific Coast Hemlock on the* PACIFIC COAST.

SERVICE DEPARTMENT

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SPECIES OF WOODS

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NORWAY PINE	RED FIR AND LARCH	PACIFIC COAST HEMLOCK	WESTERN RED CEDAR

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WHITE PINE

SERIES OF

Architectural Monographs

Volume XII *Number* 6

WISCASSET MAINE

BY

William D. Patterson

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AN

Architectural Monograph

WISCASSET, MAINE

By William D. Patterson

Being the SIXTH *Number of Volume XII and*
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THE NICKELS-SORTWELL HOUSE, WISCASSET, MAINE

Wiscasset, Maine

By William D. Patterson

IT IS claimed that DeMonts and Champlain, French pioneers in the New World, in the course of their exploration of the Maine coast, in 1605, ascended the Sheepscot River to what is now Wiscasset, and, although impressed with the beauty and majesty of its shores and the ease of access from the sea, they, learning that George Waymouth, the Englishman, had but a few weeks earlier planted the cross of St. George at what is now known as St. George's River as a token of discovery and possession, returned not hither. At what date Englishmen came to live here is not known with certainty; but it does appear from a deed given by three Indian Sagamores of this river, in 1663, to George Davie, an English seaman, who is believed to have come hence from Cornwall or Devon, in England, that Davie was then a resident of the Sheepscot region. Here he continued until he and his family were driven away by Indians in the time of King Philip's War. He returned but was finally driven off with all the other white settlers here in the next Indian War. Under the deed mentioned, and subsequent deeds from the Sagamores named, and by his rights by improvement and possession Davie claimed lands situate on both sides of the river and including the site of Wiscasset. Such rights descended to his heirs, from whom they passed by sale to persons interested in re-settling the lands here, but the hardships of a frontier life retarded the growth of population following the beginning of such re-settlement in 1729, and corporate existence was not attained until 1760.

Gradually a considerable export trade developed, consisting principally of forest products, such as white pine, oak and other primeval growths,—a trade which was pursued with varying fortunes throughout the hardships of the Revolutionary War and the later spoliations by the French. The nineteenth century brought a remarkably prosperous expansion, the neutral position of our government with relation to the Napoleonic wars permitting cargoes to be carried into European ports under the United States flag, and it was facetiously said that Wiscasset milked the British cow. Although that period of roaring trade was short-lived, the wealth of the merchants and shipowners increased so greatly that it was soon reflected in all trades and professions and was signalized by the erection of the many fine mansions which are the distinguishing reminders of the briefly enduring fortunes of that time.

Conspicuous among such mansions is that which was built for Capt. William Nickels, a retired master mariner who had become largely interested in commerce and navigation, with resulting prosperity. Upon its site originally stood the first two-story house erected at Wiscasset Point. With increase of wealth, desiring greater luxury of living and expansion of his hospitality, he rolled the old house back to a lot but a few rods distant, where it now stands, and in 1807 and 1808 he caused a new house to be built. This house, with its lofty front and rich ornamentation of carving, has ever been an object of admiration, and passing tourists today stay their speed at sight of it. Tradition has it that two years' time was devoted to finishing its front hall; that the services of one man were required to keep its hearth fires of wood supplied through the winter seasons; that it was noted for its magnificent banquets and entertainments; and an inventory of its furnishings of that period reveals that this house was the abode of the cultured and wealthy. The more ancient Nickels manors, situate in Lincoln County, are still notable for their substantial and elaborate construction, but the mansion of William Nickels surpasses them all.

No less conspicuous in the time to which this writing relates were the houses of the Woods, headed by that of Gen. Abiel Wood, who began a long business life in Wiscasset as early as 1768 and whose title was derived from his connection with the Massachusetts militia. His three-story mansion, now demolished, stood near the shore and, although of earlier date than that of Captain Nickels, is said to have resembled it in size and wealth of detail. The construction of that of his son, Hon. Abiel Wood, a noted merchant, banker, shipowner and politician, who at one time represented the Lincoln District in Congress, was begun during the War of 1812, for the momentum of Wiscasset commerce carried part way through that disastrous time; but business reverses compelled suspension of work upon it for several years, as well as the elimination of some of

the original specifications, and occupancy by the owner was not enjoyed until October, 1824. The house stands in a commanding location at the terminus of High Street and it is now occupied by descendants of the original owner. The houses of his brothers, Joseph Tinkham Wood and Hartley Wood, have also been preserved. The Joseph Tinkham Wood house, dating from 1805, was subjected to alteration in 1858, but certain of its most interesting features were fortunately retained and it is still notable for its stately entrance and its beautiful front hall and winding staircase. Wood's occupancy of it was cut short when he traded the house, and the land where it stands, to Moses Carlton, Jr., for a cargo of rum then recently landed on the latter's wharf in Wiscasset and valued at $12,000; and from Carlton's occupancy of fifty years it is more commonly known as the Carlton house. The Hartley Wood house, of less pretentious construction but still noteworthy in certain details, is now the summer home of the talented actress, Claire Eames.

We have seen that Wiscasset was incorporated in 1760. Its original corporate name was Pownalborough, it being thus called in honor of Thomas Pownall, who was then Governor of the Province of Massachusetts Bay, the jurisdiction of which extended over what is now the State of Maine. At about the time of the incorporation of Pownalborough a new county was established in these "Eastern parts," and Pownalborough was made the shire town, the courts of which were at first, and for several years, held in the western precinct adjacent to the Kennebec River. The advantages of Wiscasset harbor exceed those of that section around the Kennebec, and they were so rapidly availed of after the Revolutionary War closed that the growth of business and population at Wiscasset Point led to the removal of the courts hither,—all unitedly attracting ambitious young men to locate here. The corporate name was soon afterward changed to Wiscasset.

And so came Silas Lee, a native of Concord, Massachusetts, who graduated at Harvard College in 1784. Establishing himself at Wiscasset, where he ever after resided, Lee's law practice increased apace. He also entered political life, and while a Member of the Congess he resigned his post to accept an appointment by President Jefferson as United States Attorney for the District of Maine.

Early in the period of his residence here, Lee began to acquire real estate, and eventually secured several very desirable parcels, a part of which he developed with apparent profit. Of such lands he at first selected for a place of residence that through which High and Lee streets now run, and the first house that he put up was that in High Street which is now known as the Smith house. It is suggested that this house dates from 1792 for, although an earlier date has been assigned for its erection, it was not until that year that Lee cleared off a cloud upon the title, arising under the claims of the Wiscasset Proprietors, to the land where it stands. It ranges on a line with the Abiel Wood house and the Carlton house on that side of High Street which, from an architectural point of view, has been called the most interesting in Maine. In his journal of travels in Maine in 1796 the Rev. Paul Coffin alluded to this house as "the noble edifice of Lawyer Lee." On the same tour he noticed that Wiscasset then had "eight or ten majestic houses, and many decent, and of a common two-story size."

Judge Lee sold his High Street house to Gen. David Payson in June, 1807. Shortly after the death of Gen. Payson, in 1831, the house passed into the hands of Samuel E. Smith, who at about that time was Governor of the State of Maine, and it is now the home of his descendants.

Judge Lee's manners and address were distinguished for suavity, and at their several houses he and Mrs. Lee were fond of entertaining the Justices of Supreme Judicial Court and other dignitaries and men of parts who visited Wiscasset, and pleasing traditions of their fragrant hospitality may yet be encountered.

Near by the Smith house, and at the head of The Common, stands the Lincoln County Courthouse, the oldest building in Maine in which courts are now held. Its beautiful façade is notable for the perfect arches of its front windows and door. The date of its erection is shown by the simple but charming figures, 1824, which appear on the small, marble keystone in the arch at the entrance. This is the only one of the buildings here mentioned the cost of which is known, such cost being shown in the accounts of the agent for its construction as $10,843.09. Since May, 1825, terms of the Supreme Judicial Court have been held in this courthouse. Terms of United States courts have been held here; and at the bar have appeared the celebrated Jeremiah Mason, then of Boston, and many other distinguished lawyers, including Daniel Webster, "then," as one of his associates afterwards wrote, "in the full flush of his success and in the zenith of his power as a master of eloquence."

Looking at the spruce frame of a building erected in Wiscasset in 1872, William Chick, of many years' experience in house building, remarked: "Well, spruce is good lumber, but white pine is good enough for me." It was he who kept for many years a few well seasoned white-pine planks so that when his end should come, good white-pine lumber would be available for a water-tight box to hold his coffin.

THE COURT HOUSE, WISCASSET, MAINE

THE ABIEL WOOD HOUSE, WISCASSET, MAINE

THE NICKELS-SORTWELL HOUSE [1807-8], WISCASSET, MAINE

DETAIL OF MAIN FAÇADE

THE NICKELS-SORTWELL HOUSE, WISCASSET, MAINE

DETAIL OF ENTRANCE HALL

THE NICKELS-SORTWELL HOUSE, WISCASSET, MAINE

STAIRWAY DETAIL

THE NICKELS-SORTWELL HOUSE, WISCASSET, MAINE

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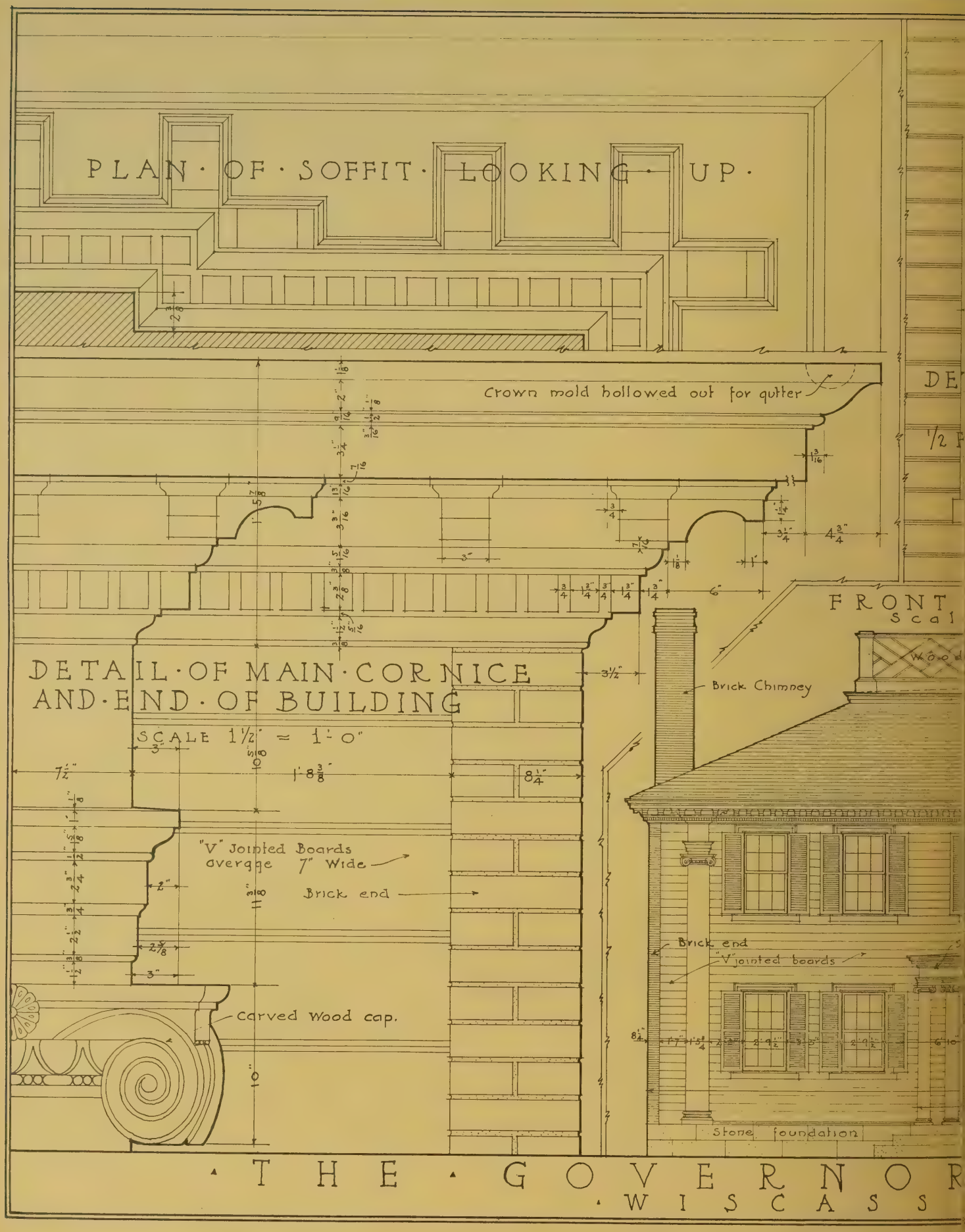
The LEE-SMITH HOUSE
WISCASSET, MAINE

GENERAL VIEW



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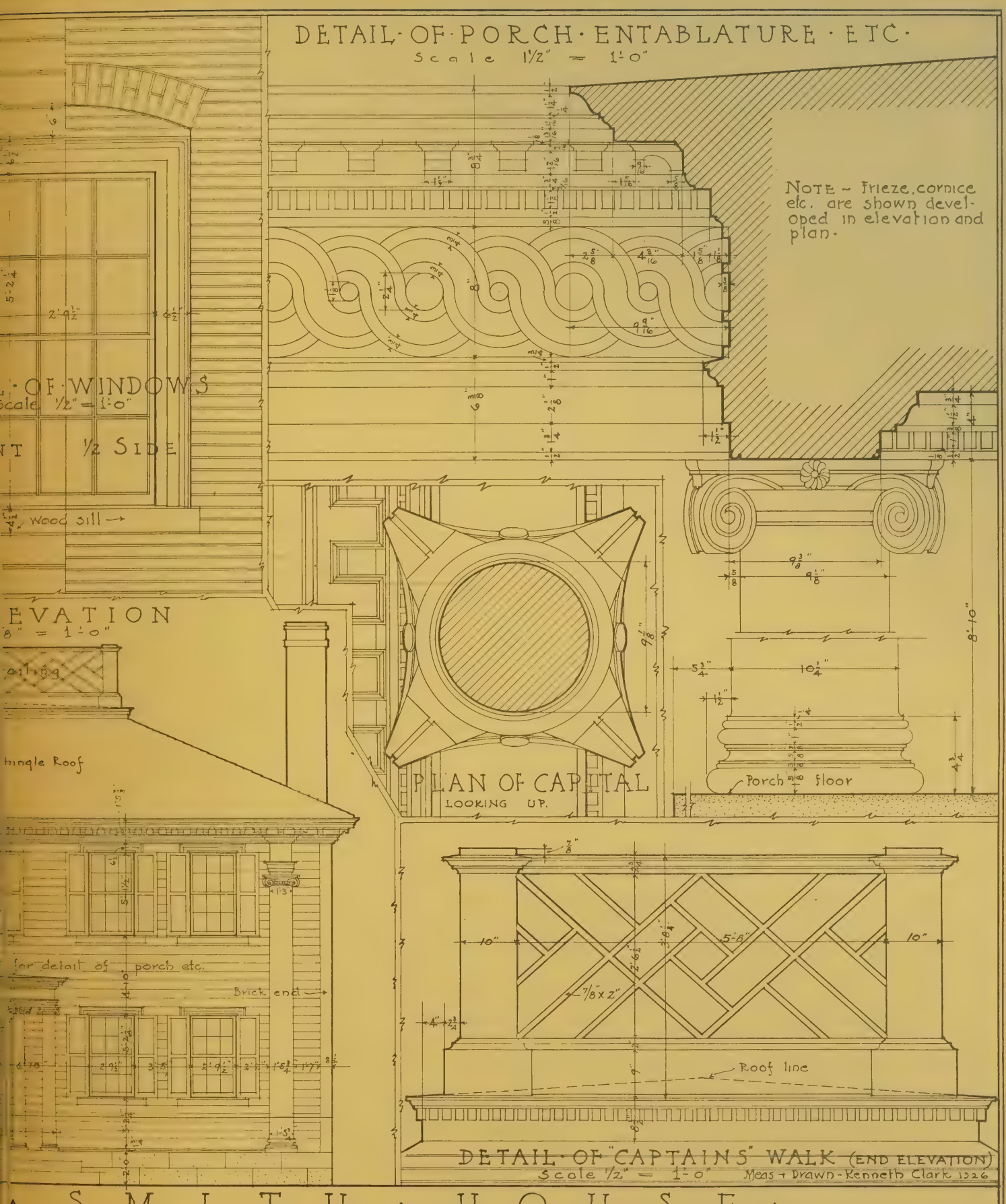
DETAIL · OF · PORCH · ENTABLATURE · ETC ·
Scale 1½" = 1'-0"
NOTE ~ Frieze, cornice etc. are shown developed in elevation and plan.
· OF · WINDOWS
Scale ½" = 1'-0"
NT ½ SIDE
Wood sill
EVATION
8" = 1'-0"
Shingle Roof
PLAN OF CAPITAL
LOOKING UP.
Porch floor
for detail of porch etc.
Brick end
Roof line
DETAIL · OF "CAPTAINS" WALK (END ELEVATION)
Scale ½" = 1'-0"
Meas + Drawn - Kenneth Clark 1926
· S M I T H · H O U S E ·
T · M A I N E ·

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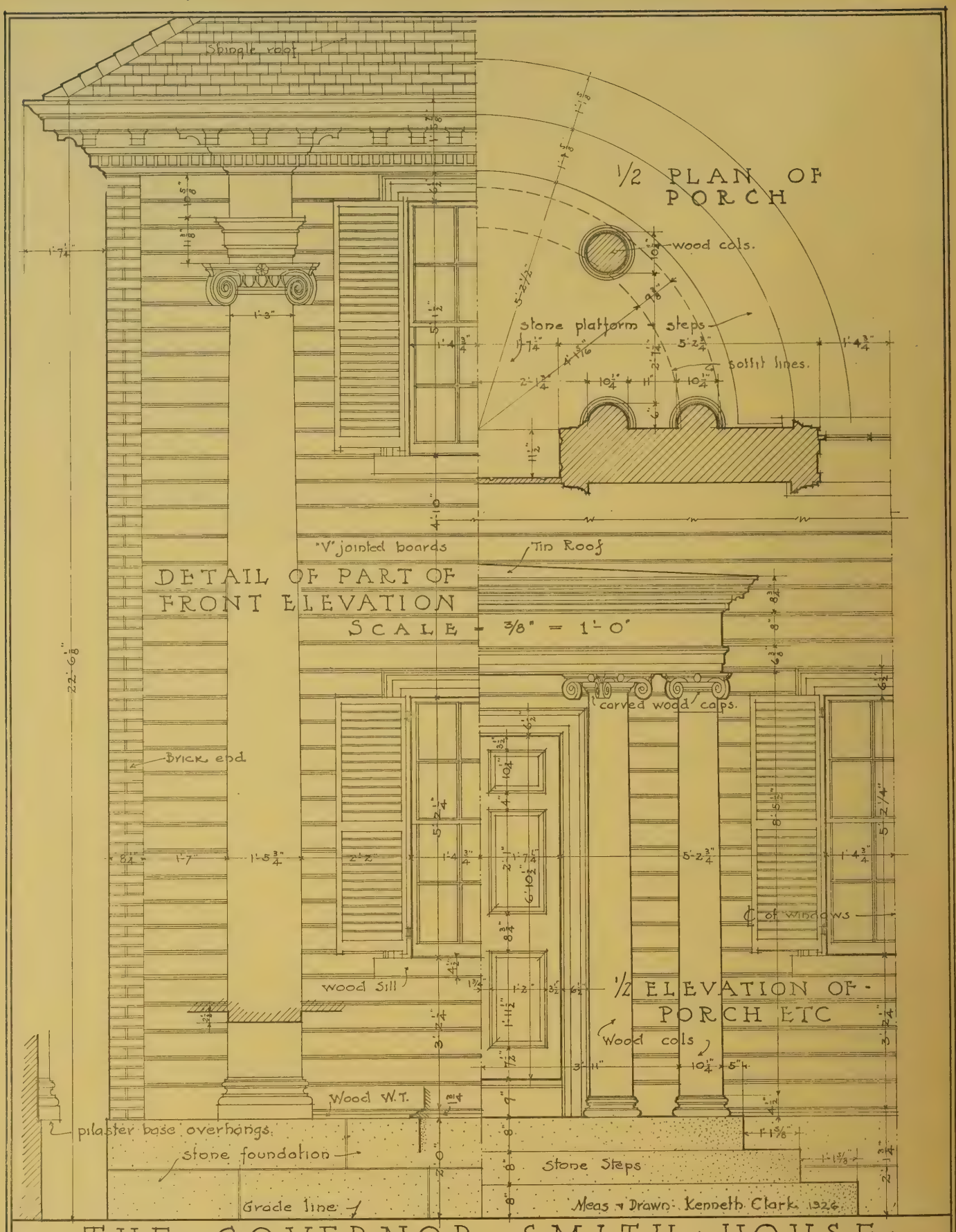


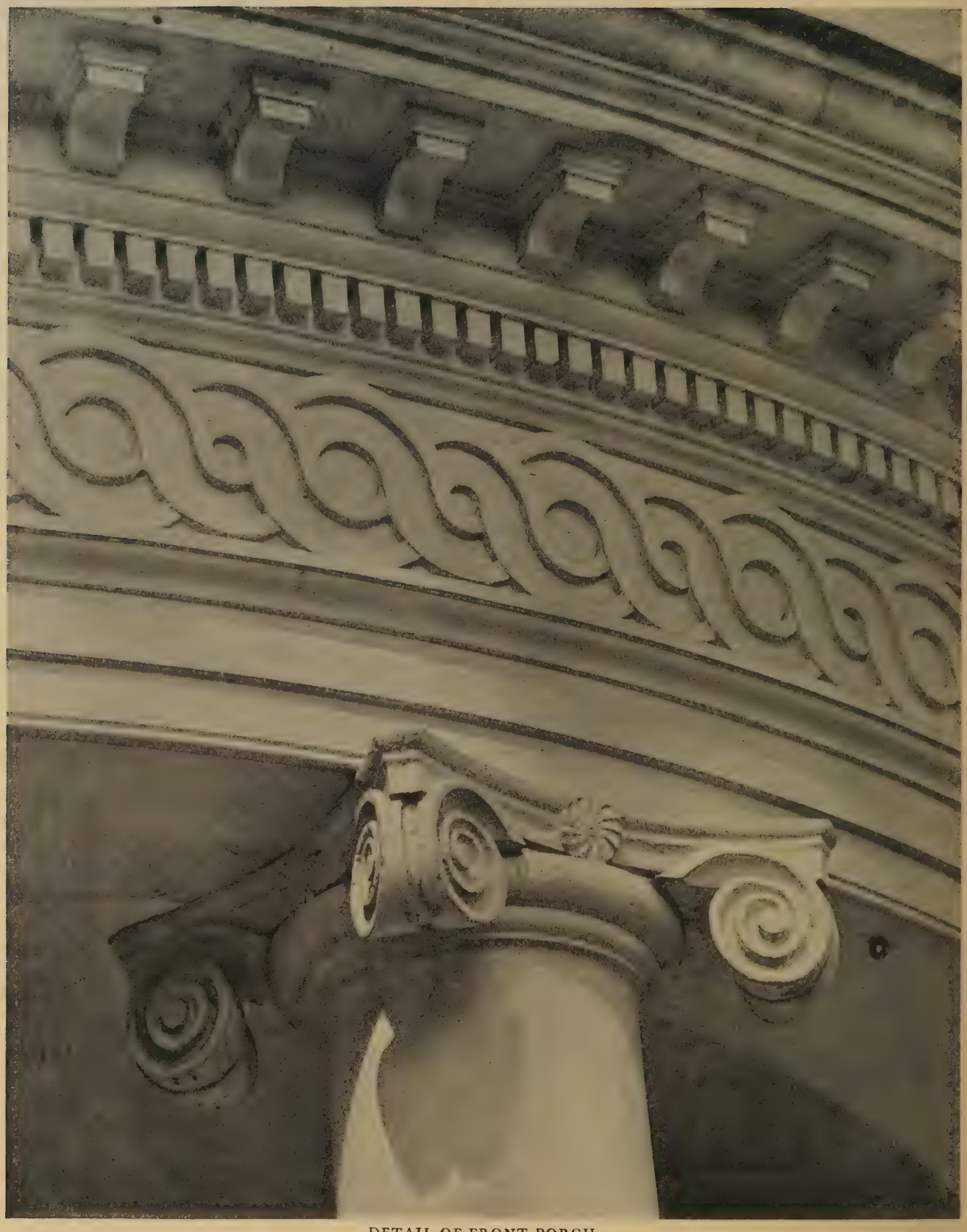
THE GOVERNOR SMITH HOUSE

WISCASSETT MAINE

Drawings are reproduced exactly at the scale marked

DETAIL OF FRONT PORCH

THE LEE-SMITH HOUSE, WISCASSET, MAINE



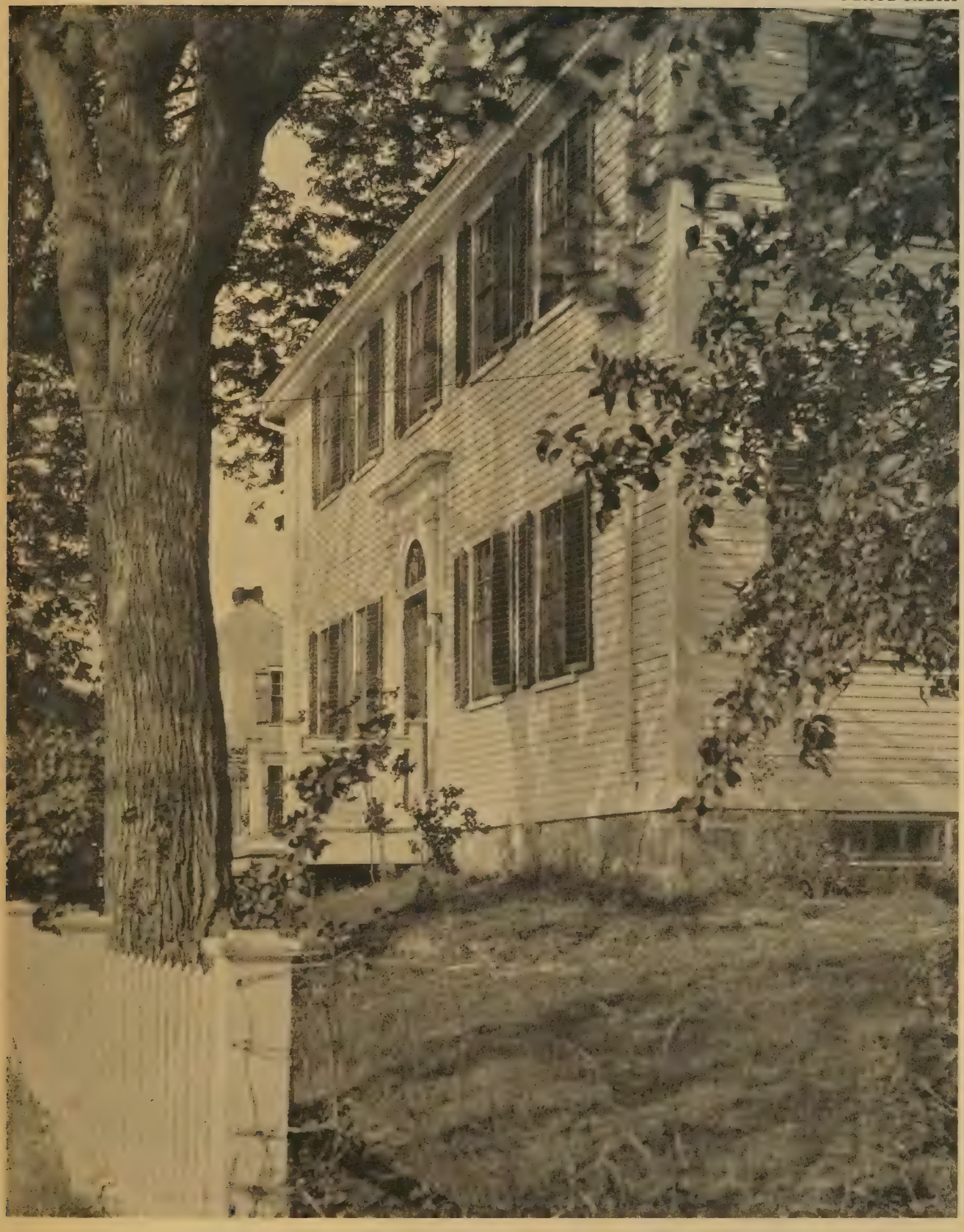
DETAIL OF FRONT PORCH

THE LEE-SMITH HOUSE, WISCASSET, MAINE

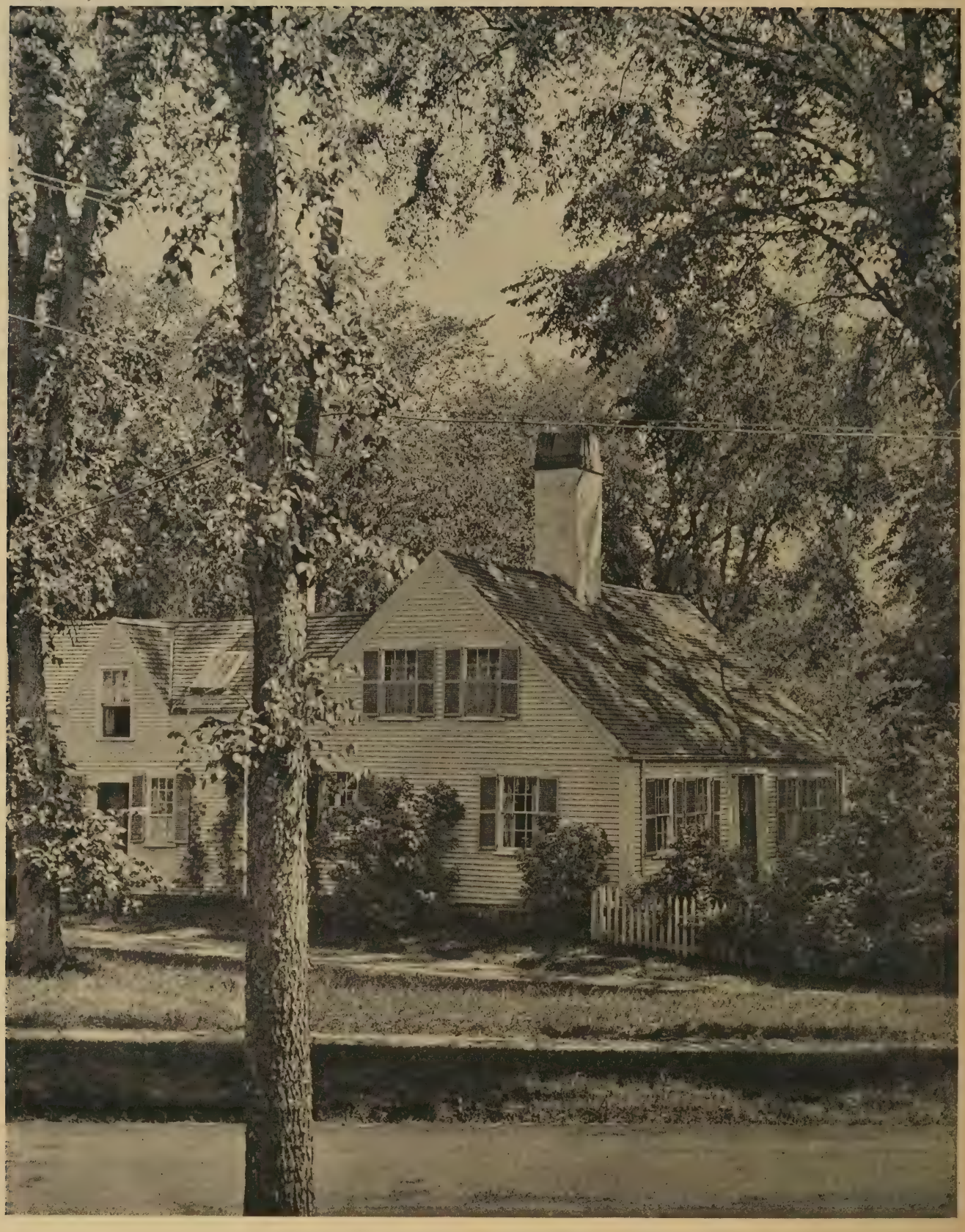
THE LEE-SMITH HOUSE, WISCASSET, MAINE [BUILT ABOUT 1792]

Now known as the Governor S. E. Smith House

THE AMES HOUSE, WISCASSET, MAINE



HOUSE OVERLOOKING THE HARBOR, WISCASSET, MAINE



THE CLAPP HOUSE, WISCASSET, MAINE

Wood Construction Details

Notes for the Specification Writer

In Connection with Drawing on Page 23

Nationally accepted standard trade association lumber terms should be used in an architect's specification, rather than the obsolete or local grade names. This will eliminate much of the confusion now existing between the architect, builder and lumber dealer and will also save the client the possibility of having to pay a "safety premium," necessitated by specifications which are not clearly understood by those who contract to supply the lumber. In the suggestions that follow, offered for the assistance of the specification writer in connection with the wood construction details, shown on the following page, the data are stated in terms which have become standard in the producing districts from which the different species are obtained.

Special attention is called to Insulation: one of the most important of recent developments in the building field

LUMBER: In view of the dangers of green or only partially seasoned lumber getting into a building and to establish the authority for the grade names used in the following specifications, it is suggested that a general clause be included in all specifications where lumber is specified as follows:

> Specifications-General: "All lumber for any purpose mentioned in these specifications shall be at least air dry when delivered for use and shall be in accordance with the standard lumber association grading rules of the producing district from which the particular kind of lumber furnished shall come."

FRAMING OR STRUCTURAL LUMBER: The lumber required for framing or purely structural purposes need not, of course, be clear lumber so long as such technical defects as it contains do not impair its strength or serviceability for this use. In fact, it would be nothing short of gross extravagance to demand clear lumber for this use. Furthermore, there are several different woods from as many different lumber-producing regions of practically equal structural merit as far as all ordinary house building requirements are concerned. Which one of these woods to choose in any given locality is therefore a question as to which one can be purchased in that locality most economically, a matter determined largely by the distance from the source of production and the consequent freight haul to the market in question. For this reason the specification of Structural lumber should be more or less elastic as is suggested in the following notes:

STUDDING, PLATES, RAFTERS, JOISTS, ETC.

> Specifications: "All structural members, including studding, plates, rafters, joists, blocking, etc., shall be No. 1 Common grade Douglas Fir (or Pacific Coast Hemlock) or (Northern Pine) or (Fir and Larch) and shall be at least air dry when delivered on the job."

SHEATHING & ROOF BOARDS: The structural requirements of these items being less rigid than for the structural items listed above, lower grades should be permitted for reasons of economy.

The common grades suggested in the following specification may be run to a Shiplap pattern or dressed and matched (D & M) as preferred.

The choice of species for these uses is even more inclusive than that suggested above for dimension lumber.

> Specification: "Sheathing or roof boards shall be No. 3 Common grade Northern Pine or (Pondosa Pine) or (Fir and Larch) or (White Fir) or (No. 1 Common Douglas Fir) or (Pacific Coast Hemlock), 6" wide and dressed and matched (D & M)."

WINDOW FRAMES and OUTSIDE DOOR FRAMES: For window frames it is peculiarly essential to use a durable wood and White Pine is therefore recommended without substitutes for all exposed parts such as sills, etc. Again, the grade of material from which the frames are to be worked may safely be left to the millwork manufacturer except as provided for as follows:

> Specification: "All window frames shall be manufactured from Genuine White Pine of Weyerhaeuser standard either Northern White Pine (Pinus Strobus) or Idaho White Pine (Pinus Monticola), of suitable grade, free from sap and with clear faces wherever exposed, made to sizes and as per detail shown on drawings."

WINDOW SASH: In addition to Genuine White Pine for window sash, another wood is beginning to enter the millwork field from the Pacific Coast, viz: Douglas Fir. A most excellent wood for a great variety of uses and being exceptionally free from sapwood, due to the large sizes of the logs from which it is cut, it is giving a good account of itself and is deserving of more than ordinary consideration. In allowing it in specifications for sash cuttings, care should be taken, however, to insure its being vertical grain as suggested below:

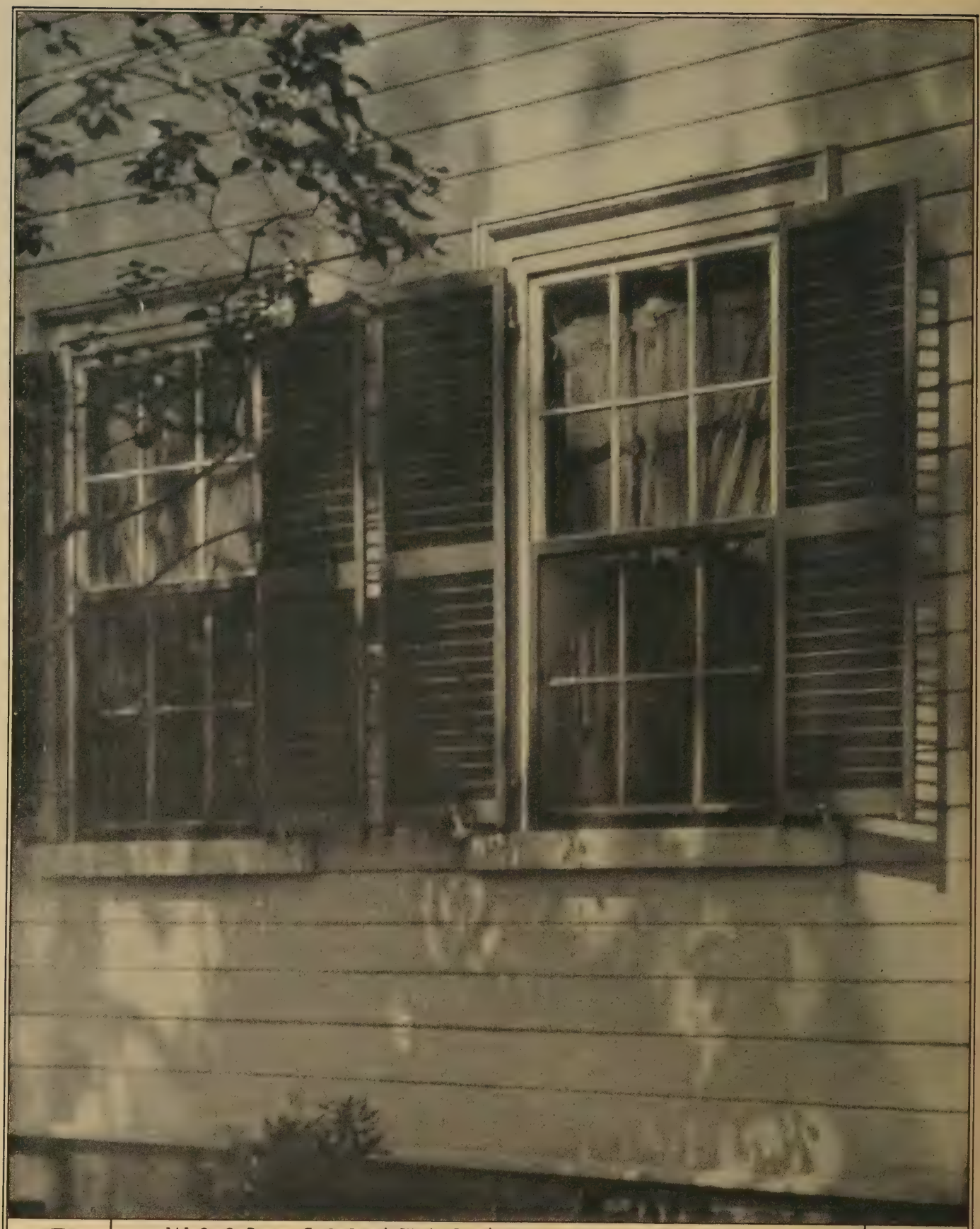
> Specifications: "Window sash shall be made from clear cuttings of Genuine White Pine (Pinus Strobus or Pinus Monticola), free from sapwood (or shall be made from clear cuttings of Vertical Grain Douglas Fir).

INSULATION: As suggested at the top of this page no single item in the construction of the modern house is more essential to comfort, both winter and summer, than a proper job of wall and roof insulation. Nor is there a more important factor in making a house easy and economical to heat. The brand of insulation recommended, namely, Balsam-Wool, is a Weyerhaeuser product, made from chemically treated, fire-resistant, sanitary wood fibre made waterproof and windproof between two sheets of tough, asphalt-lined kraft paper. It is a blanket form of insulation; flexible to permit a good, tight job and of greater practical insulating efficiency than any other similar product on the market today.

A good job of insulation requires that the insulation material be flexible and capable of tucking in to calk the cracks. This is particularly essential around window frames.

Suggested specifications for a complete job of insulation are on file in most architects' offices or may be secured from any of the branch offices of the Wood Conversion Company (Weyerhaeuser By-Products Division), at 1955 University

[*Continued on page 24*]



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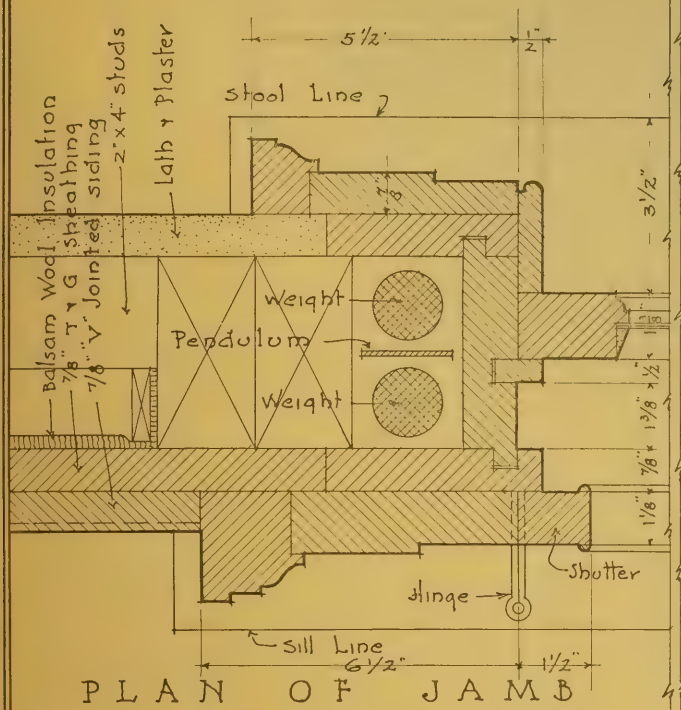
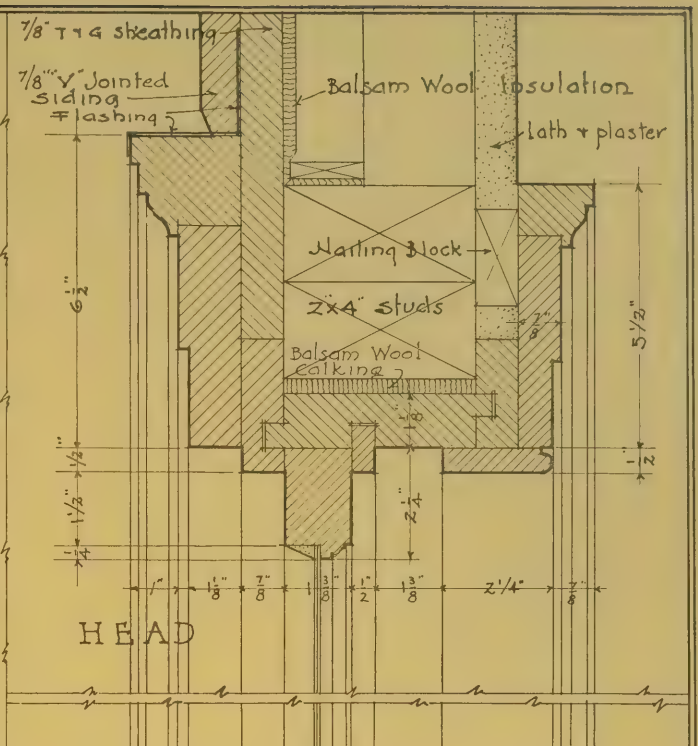
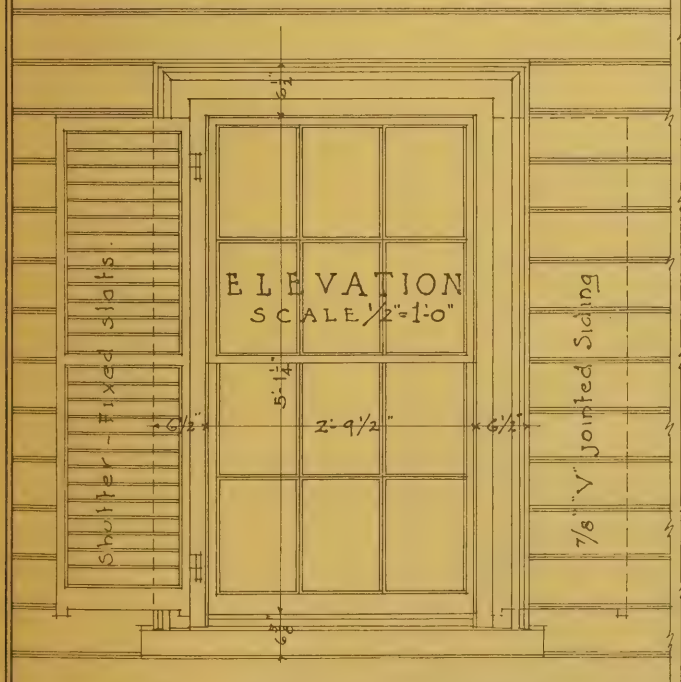


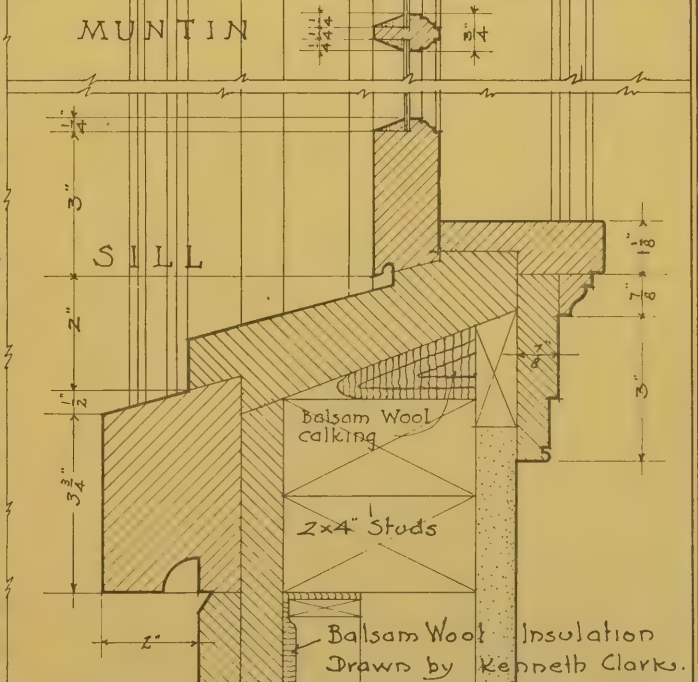
PLAN OF JAMB

SCALE = 3" = 1'-0" UNLESS OTHERWISE MARKED.



DETAILS OF A DOUBLE HUNG WINDOW BASED ON ONE IN THE GOV. SMITH HOUSE WISCASSETT ME





Drawn by Kenneth Clarke.

·WOOD·CONSTRUCTION·DETAILS·
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WOOD CONSTRUCTION DETAILS (*Continued*)

INSULATION [*Continued from page 21*]

Avenue, Saint Paul; 1849 Straus Building, Chicago; and 103 Park Avenue, New York.

> **Specifications-General:** "Heat insulation shall be standard ½"-thick Balsam-Wool, except for roof or top-floor ceiling insulation which shall be 1" thick Balsam-Wool, manufactured by the Wood Conversion Company (Weyerhaeuser By-Products Division), Cloquet, Minnesota. Continuity of insulation shall be maintained. Where floors, ceilings or roofs are insulated, as well as outside walls, insulate thoroughly between joists and rafter ends. Throughout, all joints shall be made air-tight, especially at door and window openings. Use full-length strips of insulation. End joints, where necessary, shall be butted and covered with lath, nailed through insulation to boarding or header. Insulation strips shall in all cases run in the same direction as studding, joists and rafters."

FOR OUTSIDE WALL INSULATION, including SIDE WALLS OF DORMERS. When studs are 16" O.C., insulate with 17"-width Balsam-Wool with back of insulation against inside face of sheathing. The flanges or turnouts shall be continuously fastened by means of laths or strips nailed securely through insulation to the studding on the sides and to sills, plates or headers at the top and bottom.

AROUND WINDOW FRAMES: Pack strips of Balsam-Wool tightly between window sills and headers and wherever else there are cracks which can be calked in like manner.

V-JOINT SIDING: For siding of this character Genuine White Pine alone is recommended.

> **Specification:** "Siding shall be 1 x 12" B and Better Select (or C Select) Genuine White Pine of Weyerhaeuser standard, run to pattern as per detail shown on drawing."

OUTSIDE TRIM: For outside trim, including pilasters, casings, cornice lumber, mouldings, caps, etc., there is no satisfactory substitute for Genuine White Pine in the better class of building construction. A naturally durable wood, White Pine has the important ability to "stay put" and to hold tight at the joints plus the further advantage of taking and holding paint.

Inasmuch as these items are usually furnished by the millwork house, manufactured from "Shop" or "Factory" grades, no grade specification is recommended beyond that suggested in the following specification:

> **Specification:** "All outside trim, including pilasters, casings, cornice lumber, mouldings, caps, etc., shall be cut from Genuine White Pine (Pinus Strobus or Pinus Monticola), free from sapwood and of such grade as to yield practically clear faces on all exposed surfaces."

SHUTTERS OR BLINDS: The highest class of work demands Genuine White Pine.

> **Specification:** "All outside shutters or blinds shall be made from clear cuttings of Genuine White Pine of Weyerhaeuser standard, either Northern White Pine (Pinus Strobus) or Idaho White Pine (Pinus Monticola) to detail shown on drawing."

INTERIOR TRIM, including inside casings, cornice, etc.: Genuine White Pine or Pondosa Pine are suggested for all *inside* trim of the character detailed on the preceding page. Genuine White Pine lends itself to intricate carved ornament a little more readily, perhaps, than the general run of Pondosa Pine. Both of these woods are practical and will give service and, with the proper selection of stock at the millwork factory, either one will meet the requirements imposed by the details under consideration. The availability of these species of wood, the ease and care with which they can be worked, the ability to "stay put" after once in place, and the perfection with which they take and hold paint are qualities which recommend their specification.

> **General:** All lumber used for interior trim (carved and moulded work, pilasters, casings, plinth blocks, panels, wainscot, etc.) shall be Genuine White Pine (or Pondosa Pine) having clear faces wherever exposed and shall be of detail as shown on the drawings.

NOTE: Clear cuttings in both Genuine White Pine and Pondosa Pine are available in the so-called "Factory" or "Shop" grades carried in stock by millwork manufacturers.

The Facts about the Relative Durability of the GENUINE WHITE PINES

Durability ratings of California Sugar Pine (*Pinus Lambertiana*), Idaho White Pine (*Pinus Monticola*) and Northern White Pine (*Pinus Strobus*) show that:

Northern White Pine (*Pinus Strobus*) averages 60% more durable than California Sugar Pine.

Idaho White Pine (*Pinus Monticola*) averages 35% more durable than California Sugar Pine.

To insure getting the more durable species, specify that
"All Genuine White Pine shall carry the Weyerhaeuser Genuine White Pine species mark."

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